NN10364-301

Multimedia Communication Portfolio

Multimedia Communication Server

2-server Sun Fire V100 Solaris Installation and Commissioning Guide

MCS 5100 3.5 Standard 6.0 December 2006

NORTEL

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Finding the latest updates on the Nortel Web site

The content of this documentation was current at the time the product was released. To check for updates to the latest documentation and software for MCS 5100, click one of the following links:

Link to	Takes you directly to the
Latest Software	Nortel page for MCS 5100 software located at www130.nortelnetworks.com/cgi-bin/eserv/cs/main.jsp?cscat=SOFTWARE&resetFilter=1&tranProduct=12482
Latest Documentation	Nortel page for MCS 5100 documentation located at www130.nortelnetworks.com/cgi-bin/eserv/cs/main.jsp?cscat=DOCUMENTATION&resetFilter=1&tranProduct=12482

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How to get help

This section explains how to get help for Nortel products and services.

Getting help from the Nortel web site

The best way to get technical support for Nortel products is from the Nortel Technical Support web site:

www.nortel.com/support

This site provides quick access to software, documentation, bulletins, and tools to address issues with Nortel products. From this site, you can:

- download software, documentation, and product bulletins
- search the Technical Support Web site and the Nortel Knowledge Base for answers to technical issues
- sign up for automatic notification of new software and documentation for Nortel equipment
- open and manage technical support cases

Getting help over the phone from a Nortel Solutions Center

If you do not find the information you require on the Nortel Technical Support web site, and you have a Nortel support contract, you can also get help over the phone from a Nortel Solutions Center.

In North America, call 1-800-4NORTEL (1-800-466-7835).

Outside North America, go to the following web site to obtain the phone number for your region:

www.nortel.com/callus

Getting help from a specialist by using an Express Routing Code

To access some Nortel Technical Solutions Centers, you can use an Express Routing Code (ERC) to quickly route your call to a specialist in your Nortel product or service. To locate the ERC for your product or service, go to:

www.nortel.com/erc

Getting help through a Nortel distributor or reseller

If you purchased a service contract for your Nortel product from a distributor or authorized reseller, contact the technical support staff for that distributor or reseller.

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Overview

The MCS 2-server Sun Fire* V100 Solaris system is a small-scale version of the Multimedia Communication Portfolio (MCP) system, geared towards an environment with a maximum of 250 subscribers. This system allows more effective cost management for smaller-sized enterprises.

This document describes the installation of the 2-server Sun Fire V100 Solaris system.

The 2-server Sun Fire V100 Solaris system must be connected to a 100-MB full-duplex Ethernet switch. The IP configuration consists of one public IP address. The following figures show the possible network configurations.

Figure 1 2-server network with redundant Ethernet switches

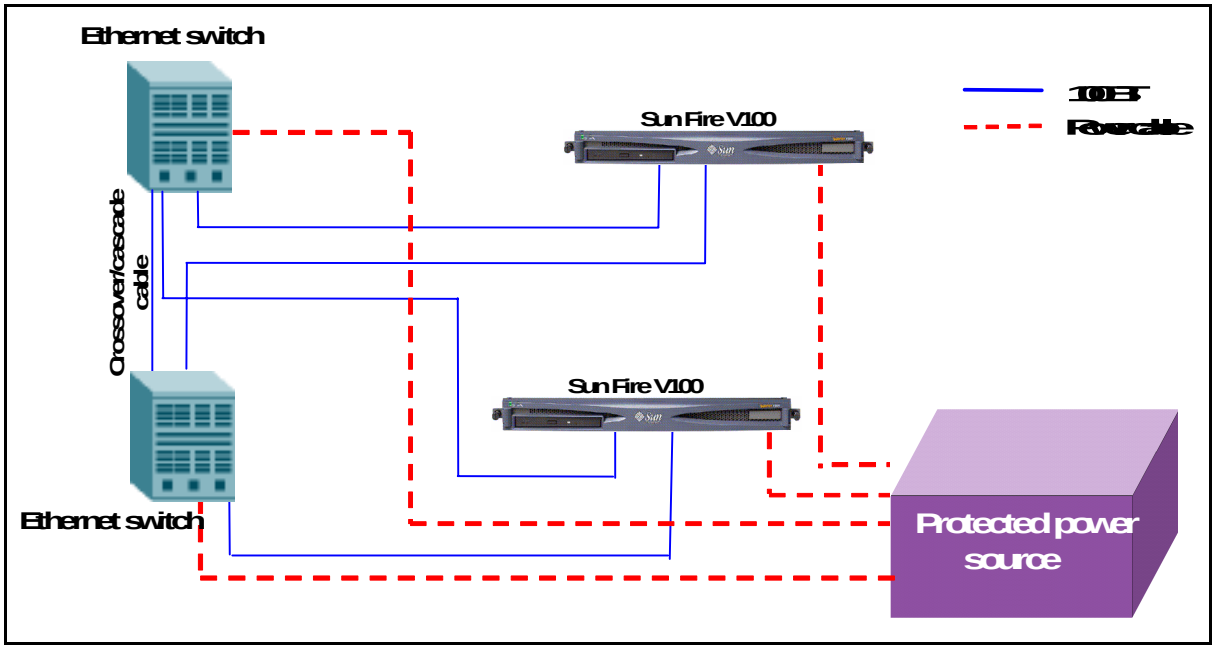


Figure 2 2-server network with single Ethernet switch

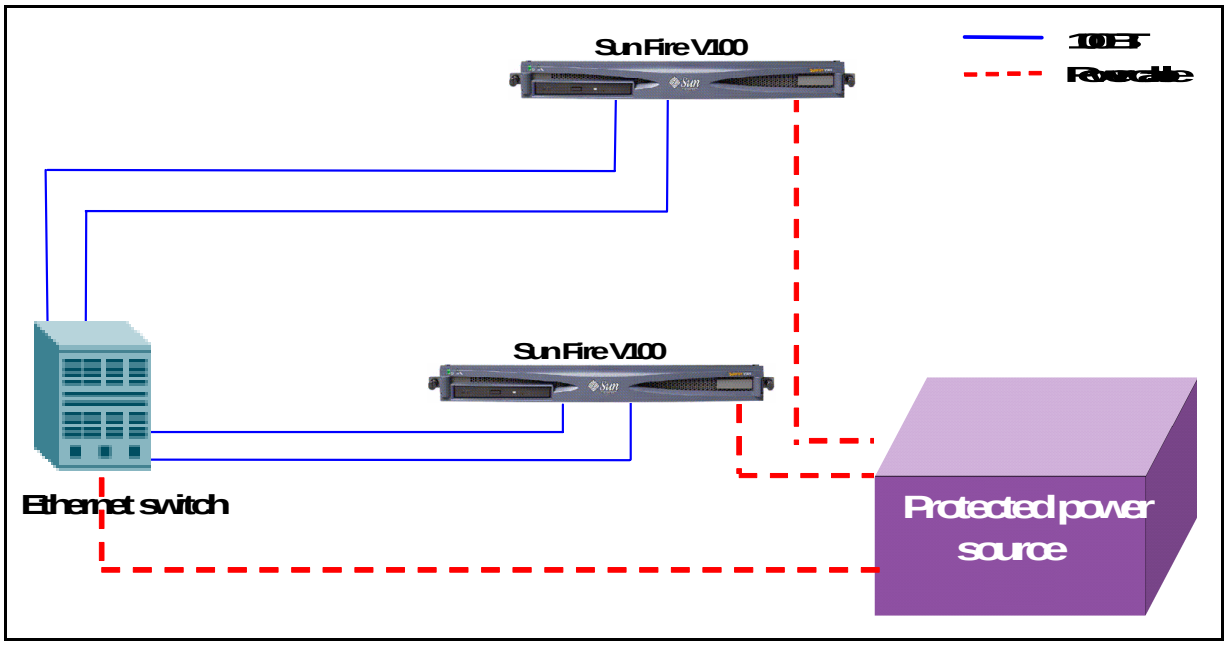
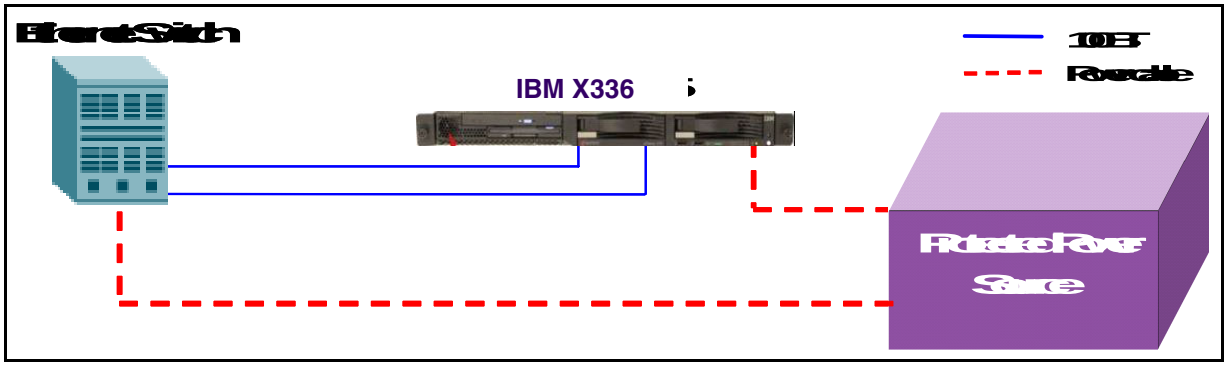
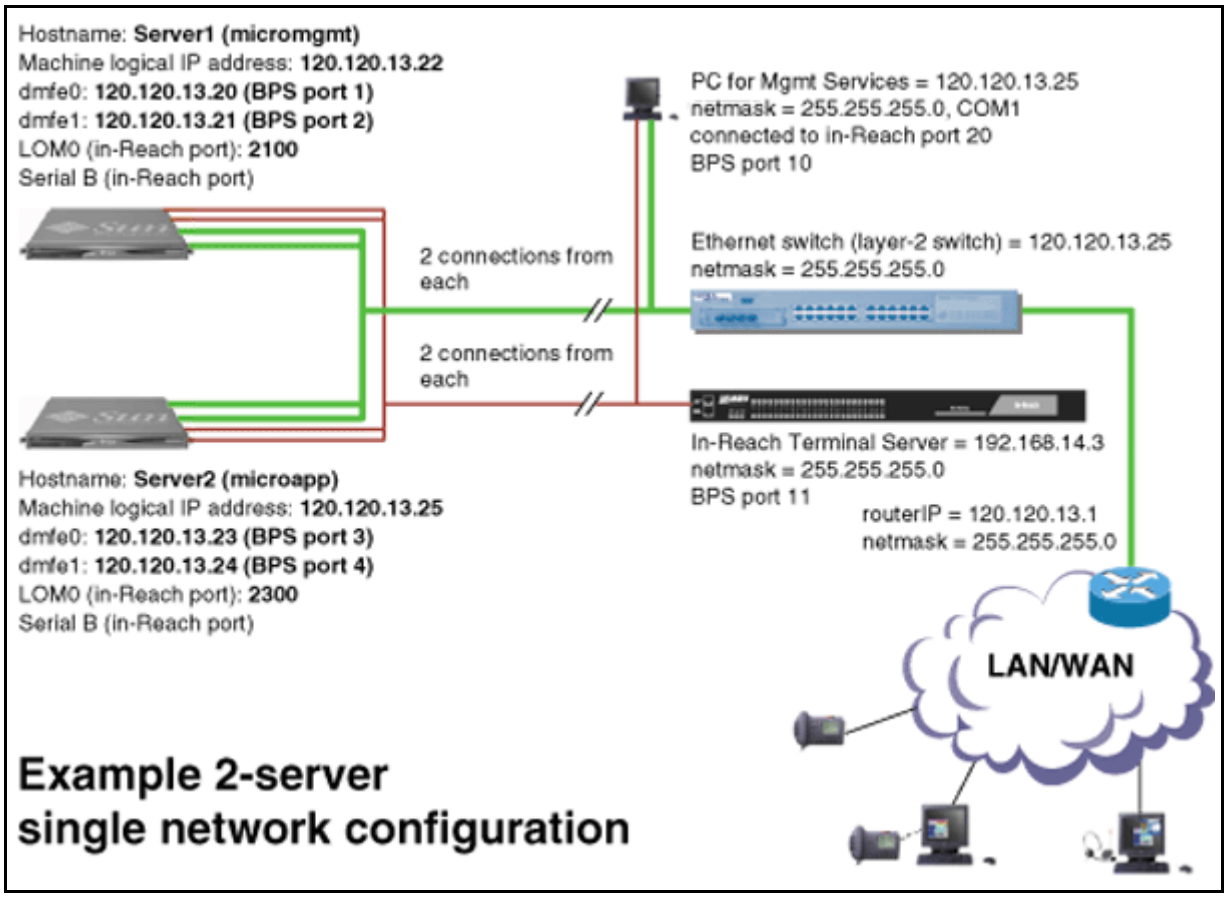


Figure 3 2-server network MAS Ad hoc audio conferencing with single Ethernet switch



The rest of this document will refer to the example data in the figure that follows. Print and refer to this example while executing this installation. Print and complete the CSI datasheet with your own configuration to assist in executing this installation. Configure the pc you are using for management services with an IP address that is in the same subnet of the IP address range used for the Sun Fire V100.

Figure 4 Example of 2-server Sun Fire V100 Solaris system configuration



Restrictions and limitations

The 2-server V100 Solaris system is non-redundant. Since redundancy is not built into the system, a server failure will result in the loss of services. The 2-server V100 Solaris system has a mirrored disk. In the event of a disk failure, the failed disk should be replaced as soon as possible. The 2-server V100 Solaris system has the following limitations:

- The system supports a maximum of 250 subscribers.
- Supported conference ports consist of 30 G.711 or 10 G.729.
- The system does not support live upgrades.
- System maintenance, starting, or stopping of components is not supported while the system is live. Doing any maintenance while the system is live may have adverse effects on call processing.
- Two-server-to-four-server migration is not supported.

MCS 5100 documentation

Refer to the *MCS 5100 Network Deployment and Engineering Guide, NN10313-191,* that accompanies the MCS 5100 product and to your customer-specific information (CSI) datasheet for your system requirements.

For more information on component installation and commissioning tasks, refer to the specific component documentation:

- *MCS 5100 Accounting Module Basics, NN10279-111*
- *MCS 5100 SIP Application Module Basics, NN10259-111*
- *MCS 5100 Database Module Basics, NN10267-111*
- *MCS 5100 Management Module Basics, NN10268-111*
- *MCS 5100 Provisioning Module Basics, NN10274-111*
- *MCS 5100 Provisioning Client User Guide, NN42020-105*
- *MCS 5100 H.323 Gatekeeper Basics, NN10280-111*
- *Media Application Server Network Engineering and Deployment Guide, NN10377-191*
- *MCS 5100 Ad Hoc Audio Conferencing Service Guide, NN10297-111*
- *Media Application Server Meet Me Audio Conferencing Service Guide, NN10303-111*
- *Media Application Server - Music on Hold Service Guide, NN10378-113*
- *Media Application Server Announcements Service Guide, NN10379-113*
- *Media Application Server IM Chat Service Guide, NN10380-113*
- *Media Application Server - Meet Me Audio Conferencing Quick Reference, NN10283-001*
- *MCS 5100 IP Client Manager Basics, NN10256-111*
- *MCS 5100 Web Client Manager Basics, NN10278-111*
- *MCS 5100 Interworking Guide, NN10372-111*
- *MCS Backup and Recovery Guide, NN42020-502*
- *MCS Accounting Common Call Scenarios Reference Guide, NN10374-800*
- *Provisioning Enhanced 911 User Guide, NN42020-132*

- *MCS 5100 Fault Management: Alarm and Log reference, NN10385-900*
- *MCS 5100 Performance Management: OM reference , NN10386-700*

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Before you start the installation

ATTENTION
Make sure you install the latest software loads. Check with your support team for the correct latest load.

Prerequisites

Have available your completed Customer-Specific Information (CSI) datasheet. Refer to the *MCS 5100 Network Deployment and Engineering Guide, NN10313-191,* that accompanies the MCS product for CSI and system requirements. Make a copy of the CSI datasheet from Appendix E of the *MCS 5100 Network Deployment and Engineering Guide* (*NN10313-191)*. Fill out the datasheet with relevant information from your system administrator.

You must have **read and understood** all the Release Notes before the installation begins.

Nortel Networks strongly recommends the use of high-speed data network connectivity for optimum remote service capability. Without broadband connectivity, remote service options are limited. Nortel Networks recommends the Contivity Remote Access Solutions for this function.

Nortel Networks also recommends following standard data center conventions for having a Universal Power Supply (UPS) as the power backup for the servers. For more information, refer to the *MCS 5100 Network Deployment and Engineering Guide, NN10313-191,* which shows how to connect servers to two different UPS systems for maximum uptime.

For power over Ethernet in the closet switches, Nortel Networks recommends use of the Ethernet Switch 460 Power Over LAN layer 2 Ethernet switches.

The procedures in this Guide assume that you are using the PuTTY VT100 terminal emulator tool.

ATTENTION
To set up sessions, download from the web the PuTTY VT100 Emulator, a shareware configurator tool.

Download PuTTY from
www.chiark.greenend.org.uk/~sgtatham/putty/

Provide the following hardware:

- Business Policy Switch 2000 (BPS 2000) or Layer-2 switch
- One (1) cat-5 Ethernet cable that is used to connect the MRV LX terminal server to the layer-2 switch.
- PC (for management administration). Refer to Minimum and recommended requirements for customer-provided PC on page 23.

ATTENTION
You must have access to the MCS network.

Make sure

- There are no other maintenance or provisioning activities pending, and no such activities are planned for the duration of the installation procedures and follow-up soak period.
- You have a detailed knowledge of your network's configuration.
- You have proficiency using UNIX operating system commands.
- You have access and privileges to the network.
- You have authority or immediate access to people with authority to make decisions on any issues that may arise.

Acronyms

The following acronyms are referenced in this document:

- lights out management (LOM)
- Network Time Protocol (NTP)
- customer-specific information (CSI)

Key stroke symbols

The following key stroke symbols are used in this document.

When you are asked to	You must...
Press **Esc+2**	Press **Escape** then press **2.**
Navigate	Use the arrow keys to move up or down.
Select	Use the spacebar to select an item.
<Value in brackets**>**	Enter value indicated in brackets.
[Enter**]**	Press key indicated in brackets.

Text conventions used in this document

This document uses the following text conventions:

- Bolded type is used to signify commands or buttons that you must press to perform an action, for example, **Apply.**
- Courier type is used to signify what appears on screen, for example, `Enter your password.`
- Italic type is used for emphasis, for special words, or for reference information; for example, "Log in as *root.*"

Server configuration

The following table shows the basic configuration of the 2-server V100 Solaris system.

Table 1 2-server configuration

Configuration	Server type	Components
2-server V100 Solaris	Server1	Active System Manager Active Accounting Manager Primary database Oracle Monitor
	Server2	IPCM (S1) Active Provisioning Module Active SIP Application Module Active WebClient Manager iPlanetMonitor UFTP Base Software

Loading disks

MCS 5100 Release 3.0 Base Platform System SoftWare Kit NTVW01AJ contains multiple copies of the same CDs to allow simultaneous installation across servers. See Table 2, Mapping of Kit NTVW01BD disks to servers (with times), on page 21 for details. Nortel Networks recommends that you install the same CDs on both servers at the same time to reduce installation time.

As shown in Table 2, Mapping of Kit NTVW01BD disks to servers (with times), Disks 1-5 have four copies each. Disk 6 only needs to go on Server 1 (the server on which the Management and Accounting Modules reside). There are six Oracle disks, with one copy, going on Server 1(the server on which the Database Module resides).

MCS Base Platform System Software disks are loaded on the following servers as indicated in Table 2, Mapping of Kit NTVW01BD disks to servers (with times)

Table 2 Mapping of Kit NTVW01BD disks to servers (with times)

MCS Base Platform System Software: Order code NTVW01BD	Approximate time to install	Server 1	Server 2	Management PC
CD1 Disk Partitioning & Solaris OS Kernel	45 minutes	X	X	
CD2 Solaris OS Packages	15 minutes	X	X	
CD3 Solaris Packages and Patches	90 minutes	X	X	
CD4 MCP Installation & Commissioning	20 minutes + disk mirroring, 10 minutes	X	X	
CD5 MCP Base Platform & 3rd Party Software	30 minutes	X	X	
CD6 MCP Application keycoded S/W	20 minutes	X		
CD7 MCP Element Manager Console	15 minutes			X
Oracle disks 1-6	90 minutes	X		
Total (approximate) time for each server.	3.6 hours for each server, plus 90 minutes Oracle installation on Database server			

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Minimum and recommended requirements for customer-provided PC

Configure your management pc to have an IP address that is in the same subnet of the IP address range used for your servers. Check your pc vendor's documentation to learn how to configure the PC's IP address.

Minimum and recommended requirements for the customer-provided management PC include (assuming you are not running anything else on the pc):

- processor:
  - minimum: 600 MHz Pentium-class or equivalent processor.
  - recommended: 1.0 GHz (or higher) Pentium-class or equivalent processor.
- free RAM:
  - minimum: 64MB of RAM. (This requirement is in addition to the memory requirements of the operating system and other concurrent applications.)
  - recommended: 64MB of RAM. (This requirement is in addition to the memory requirements of the operating system and other concurrent applications.)
- free hard disk space:
  - minimum: 50MB (If the System Management Console is installed on a drive other than drive C, then 50MB of free space is required on that drive as well. In this case, the free 50MB on drive C will not be used, but is required for the installation to complete successfully.)
  - recommended: 50MB (If the System Management Console is installed on a drive other than drive C, then 50MB of free space is required on that drive as well. In this case, the free 50MB on drive C will not be used, but is required for the installation to complete successfully.)
- CD-ROM drive: required

- mouse: required
- Video Graphics Card:
  - minimum: 640x480 @8bpp [256 colors] VGA
  - recommended: 800x600 @16bpp [65,536 colors] VGA or better
- sound card: not applicable
- operating systems:
  - minimum: Microsoft Windows 98(SE)/ME/2000/XP, or Microsoft Windows NT 4.x with Service Pack 5 (SP5)
  - recommended: Microsoft Windows 98(SE)/ME/2000/XP, or Microsoft Windows NT 4.x with Service Pack 5 (SP5)
  - network connectivity: Ethernet network card
  - web browser with Microsoft Internet Explorer 6.0, or later version
  - web browser with Netscape Communicator 7.0, or later version
  - cookies: enabled
  - Javascript: enabled

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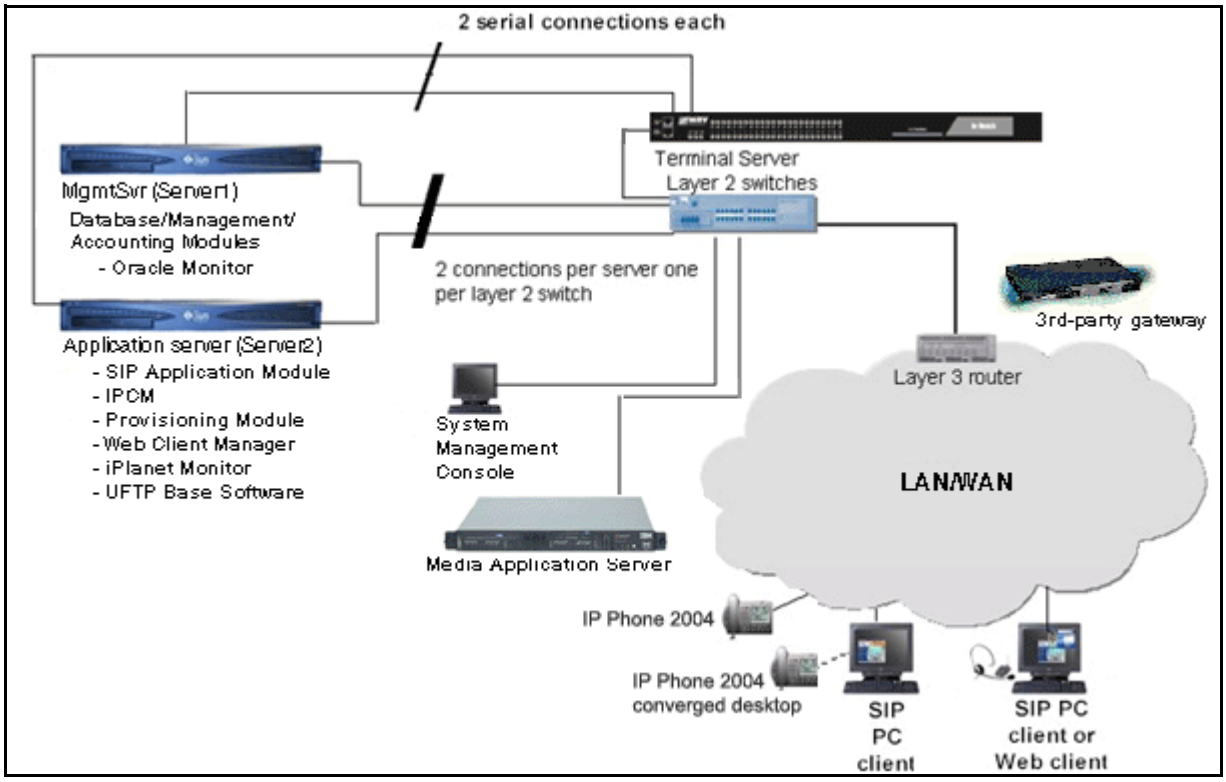
Setting up the baseline hardware

Baseline hardware

See the following figure for an overview of the hardware connectivity.

Figure 3 Hardware connections overview



ATTENTION

You need an uninterrupted power source (UPS).

If a power outage occurs, bring the server for the Database Module into service before bringing the other servers into service. If other servers do not come up, restart the server for the Management Module.

Hardware required for the 2-server system consists of the following:

- terminal server: 1 MRV LX-4008-101AC including
  - Linux-based secure console standalone unit with 8 RS232 RJ45 ports
  - internal V.90 modem and AC power
  - software and documentation on CD-ROM
- core servers: 2 Sun Fire V100 servers including
  - 1 550-MHz UltraSPARC IIi Processor with 512-KB On-Chip L2 Cache
  - 1-GB Memory
  - 2 40-GB 7200 RPM IDE Disk (second disk for mirroring)
  - CD-ROM
  - 2 10/100-Mbit Ethernet and USB Ports
  - System configuration card
  - Solaris* 8 and LOMlite2 pre-installed
  - two (2), cat-5 Ethernet cables for each V100 server (for a total of four (4) ethernet cables)

    Note: Each V100 server uses two (2) ethernet cables to connect the V100 servers to the layer-2 switch.

  - two (2) serial (RS232) cables for each V100 server (or a total of eight (8) serial cables.)

    Note: Serial cables are ordered with the MRV LX terminal server.

    – one (1) cable for Serial Port A (LOM)
    – one (1) cable for Serial Port B
  - Sun Fire V100 server documentation

- Media Application Server: 1 IBM x336 (2 3.6 GHz Xeon, 1-GB RAM, 1 73-GB SCSI drive, Windows 2000)
- Multimedia PC Clients

ATTENTION

Make sure you have

- Business Policy Switch 2000 (BPS 2000) or Layer-2 switch
- vendor documentation for configuring your Layer-2 switch
- one (1) additional cat-5 ethernet cable to connect the MRV LX terminal server to the layer-2 switch
- a pc for the System Management Console, and access to the network

WARNING

Static electricity could be harmful to the servers.

Setting up rack to mount hardware

Procedure 1 Setting up rack to mount hardware

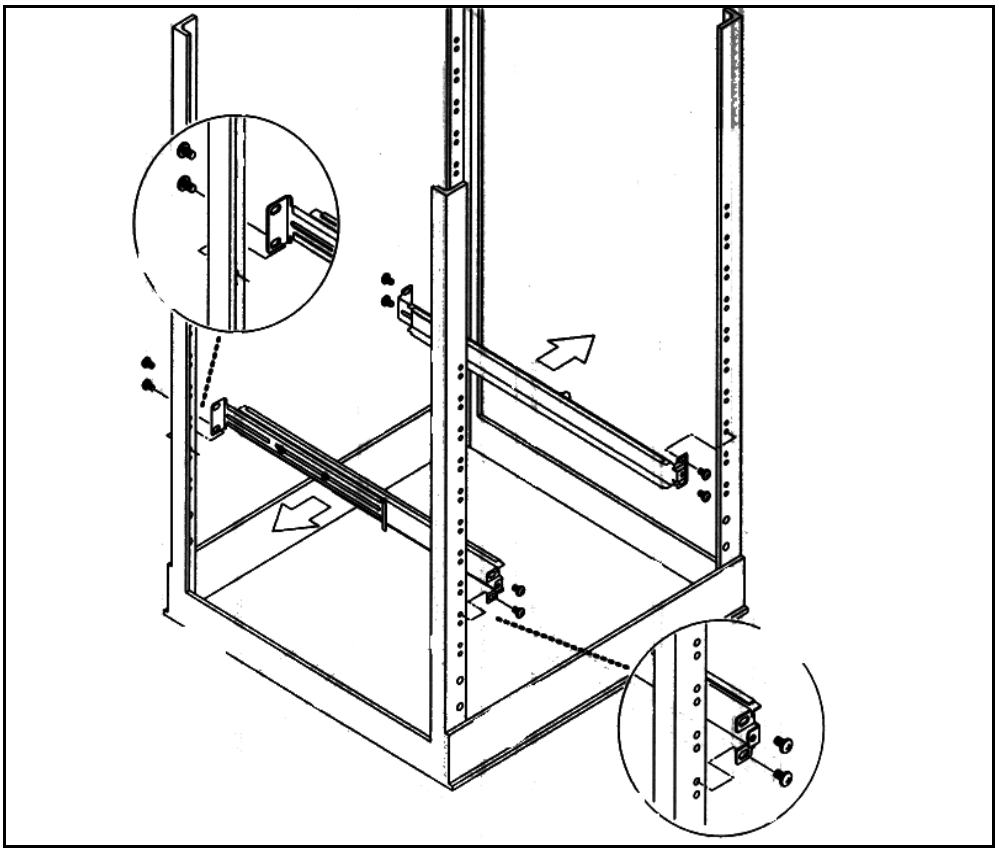
At the rack,

1 Mount all equipment. Refer to the following diagram that displays the mounting for the rack.

- Mount Layer-2 switch.
- Mount the MRV LX terminal server.
- Mount Sun Fire V100s.
  - — Database/Management/Accounting server
  - — Application server
- (optional equipment) Mount conference server. Refer to the Media Application Server documentation for more information.
- (optional equipment) Mount gateway. Refer to customer-specific gateway installation documentation.

Note: All MCS equipment is 19-inch rack mountable.

Figure 4 MCS 5100 19-inch rack



Connecting the Sun Fire V100 server to the layer-2 switch

Procedure 2 Connecting the V100 server to the layer-2 switch

At the back of the Sun Fire V100 server,

1 Connect the Sun Fire V100 server Net 0 and Net 1 ports to the layer-2 switch using Ethernet, cat-5 cables.

Figure 5 Back view of Sun Fire V100 server

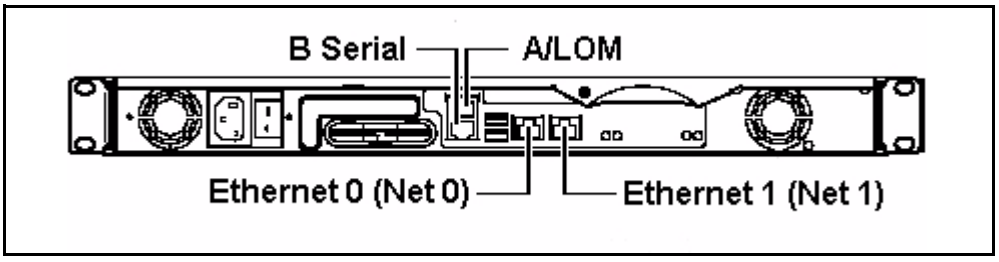
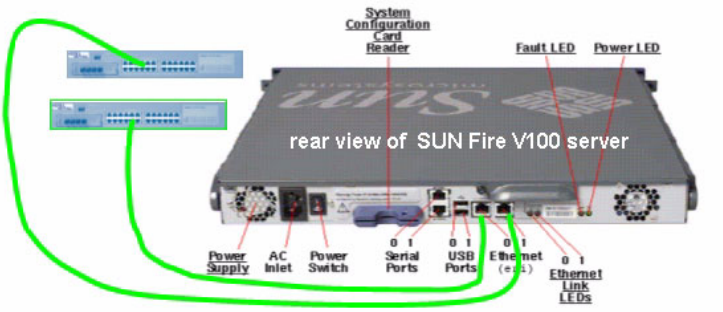


Figure 6 Sun Fire V100 server cabling to layer-2 switch



Note 1: Net 0 and Net 1 are for redundancy. It is preferable that each Ethernet port get cabled to a different layer-2 switch, if available, for maximum redundancy.

Note 2: The two Ethernet switches are physically linked together through either cascade modules or Ethernet links.

2 Plug in the power cords at the back of the V100 server.

ATTENTION
Do *not* power up the server at this time.

Connecting the Sun Fire V100 server to the MRV LX terminal server

The MCS 5100 platform uses the Sun Fire V100 server medium configuration.

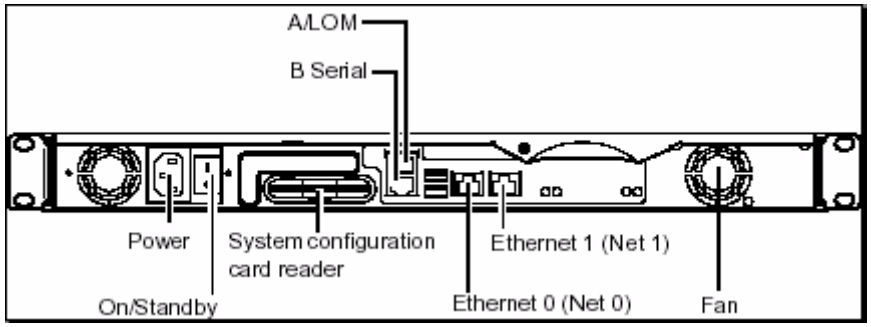
Note: This server is only available in an AC power configuration.

Procedure 3 Connecting the serial port on the V100 to the MRV LX terminal server

At the back of the Sun Fire V100 server,

1 Connect the Sun Fire V100 server A/LOM serial port and B-serial port to the MRV LX terminal server:

Figure 7 Sun Fire V100 server network callouts



ATTENTION

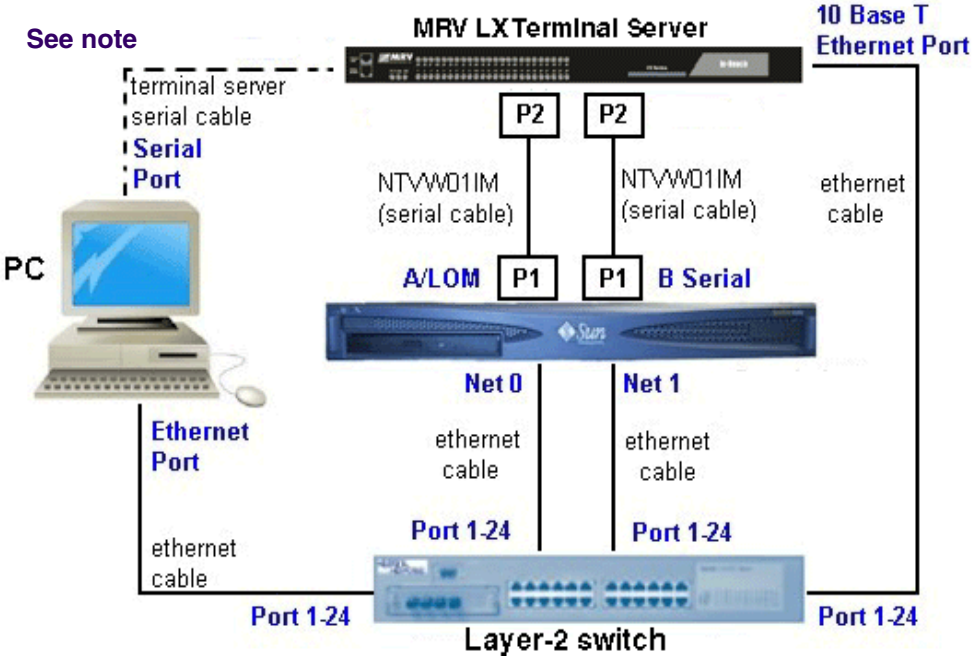
If the network is down, or the server needs to be configured or restarted, use the console port A.

By default from manufacturing, serial port A is the only active serial port.

Note 1: The cables with part numbers A0500465 or NTVW01IM are serial cables.

Note 2: The P1 end goes to the V100 server and the P2 end goes to the MRV LX terminal server.

Figure 8 P1 and P2 custom cable connections to terminal server



Note: This cable is only connected to configure the terminal server. Following configuration, remove the cable.

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Installing and accessing the MRV LX-4000 series terminal server

The MRV LX terminal server allows the installer to access all the servers simultaneously.

ATTENTION

For complete information on how to install, configure, and access the MRV LX terminal server, refer to the MRV Communications, Inc., LX Series Software Kit CD, particularly the "Getting Started with the LX-4000 Series" and LX-4000 Quick Start Instructions that come in the terminal server box, or go to www.mrv.com.

Procedure 4 Connecting the MRV LX terminal server cable to the servers and management PC

At the terminal server,

1 Connect port 8 to the management PC using the console cable and db9 connector that comes with the MRV LX terminal server.

Note: After the terminal server has been configured, the connection between the management PC and the terminal server is not needed, and the cable can be removed.

2 Connect the MRV terminal server 10 Base-T port to the layer-2 switch.

Refer to the *Getting Started with the LX-4000 Series* document in the CD that comes with your terminal server for specific information about the pinouts on your terminal server model.

Procedure 5 Accessing the MRV LX terminal server

At the browser address field,

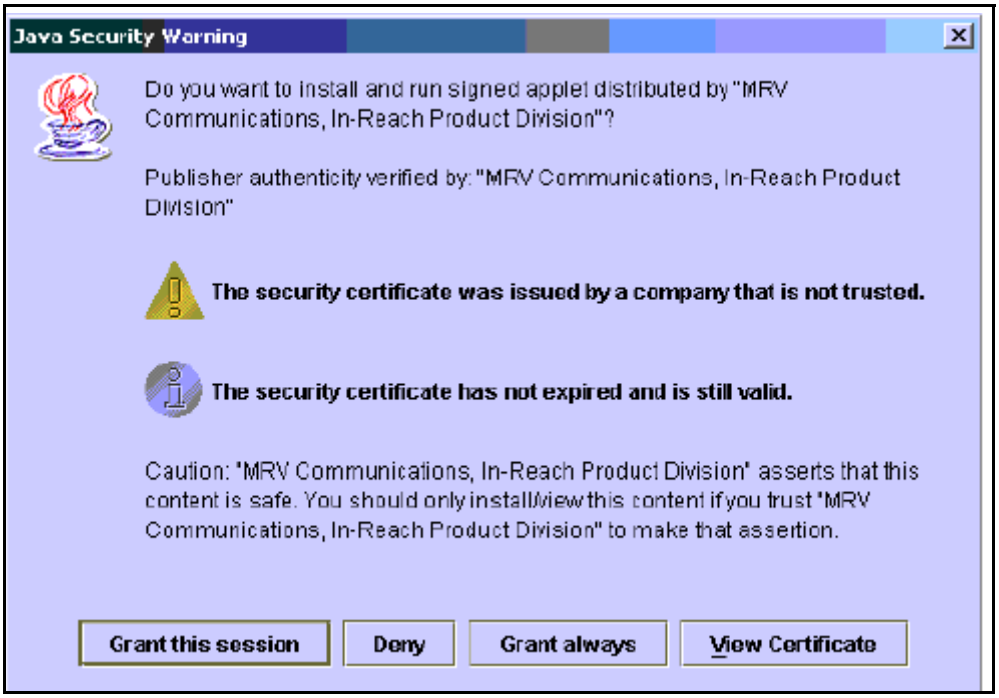
1 Type in the IP address of your MRV LX terminal server. The LX Series Configuration Console page appears, as shown.

Figure 9 MRV Configuration Console window

2 Make sure you have the Java Plug-in installed.

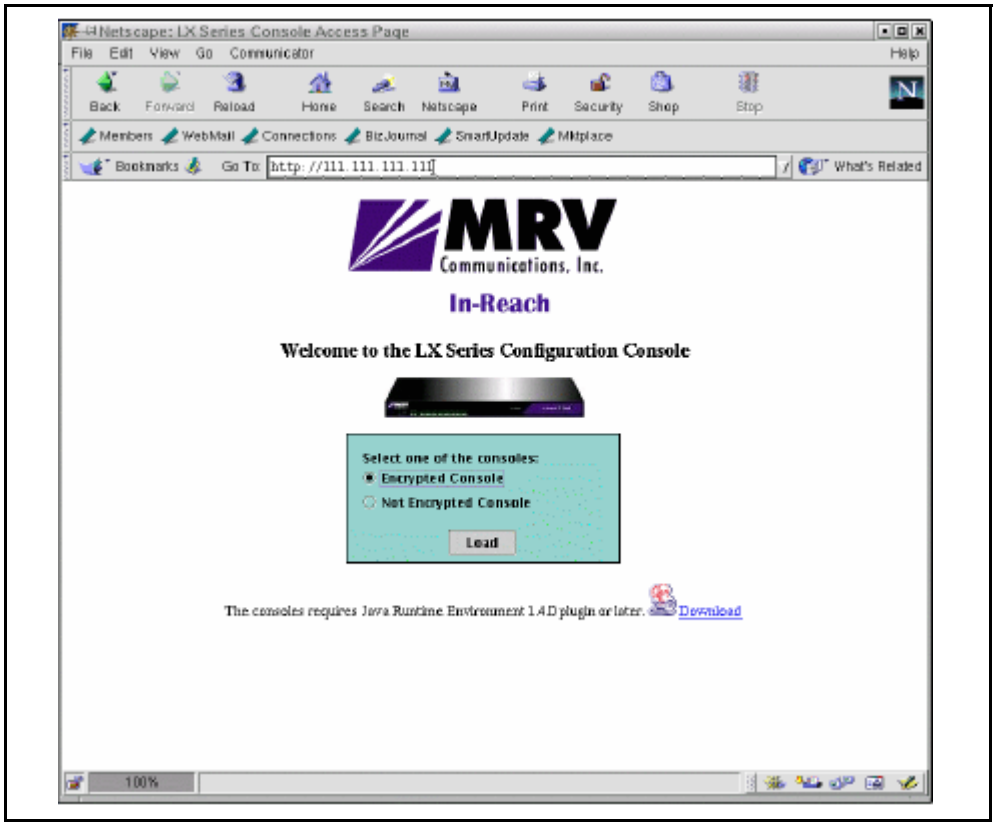
3 When your browser connects to the terminal server, the Java Security Warning window appears.

Figure 10 Java Security Warning pop-up window



4 Click on **Grant this session**. The Java Security Warning window closes. The LX Series Configuration Console page reappears, now with the green console selection visible.

Figure 11 LX Series Configuration Console page

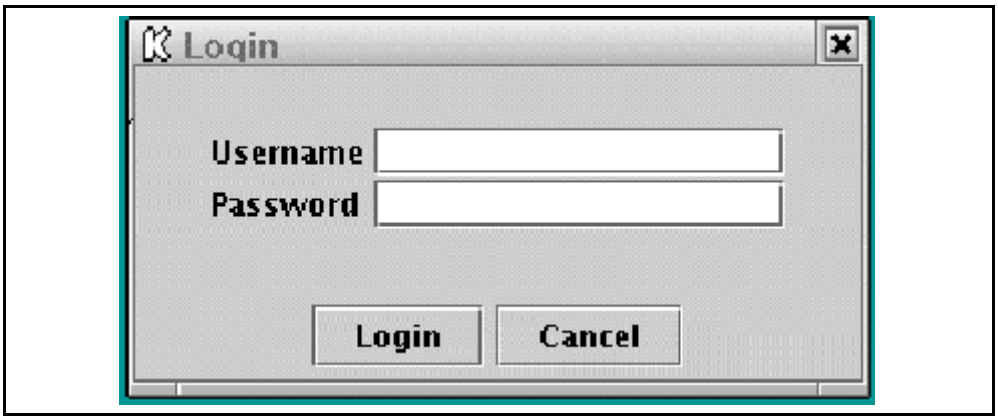


Choosing **Encrypted Console** means the Graphical User Interface (GUI) will run slower, but with security. **Encrypted** and **Not Encrypted Console** also require Java Runtime Environment 1.4 or later. Choosing **Not Encrypted Console** means the GUI will run faster, but without security.

Note: The Java cache in JRE 1.4 is set to ON by default. There is a known problem within JRE 1.4.0 and 1.4.1 regarding cache functionality, which requires you to disable the cache. On your management pc, select **Start-> Programs-> Settings-> Control Panel**, open the Java Plugin 1.4.0 icon, and click the **Cache** tab. At the Cache window, click the**Clear Cache** button and uncheck the **Enable Caching** checkbox. Click **OK**. This issue is fixed in JRE 1.4.2.

5 Select **Encrypted** or **Not Encrypted** and then select **Load**. A login window appears.

Figure 12 Login window

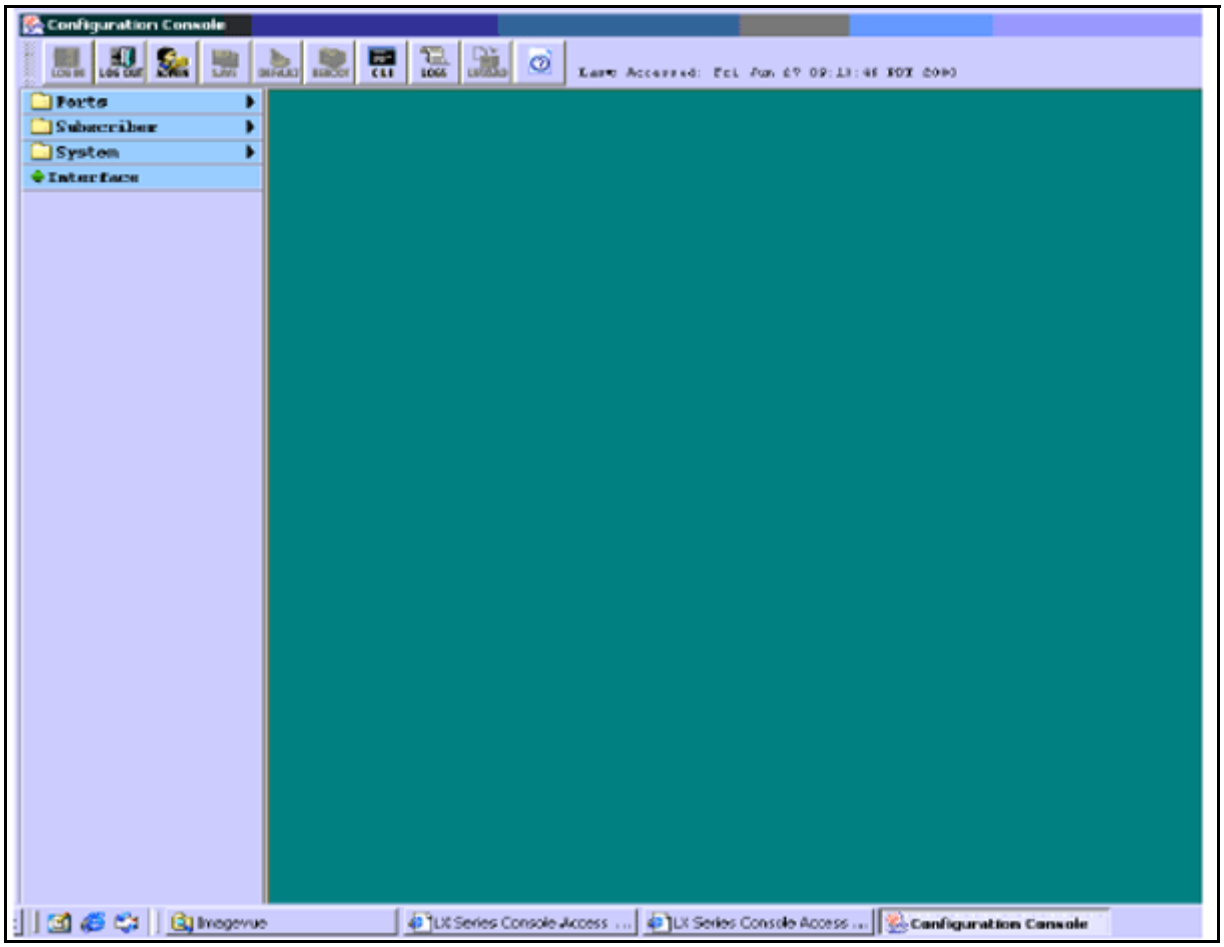


6 Enter your Username and Password, and click **Login**.

Note: By default, authentication is done against the local user database. To start, use the known username *InReach* and password *access*.

7 If you log in as a user, the following window appears.

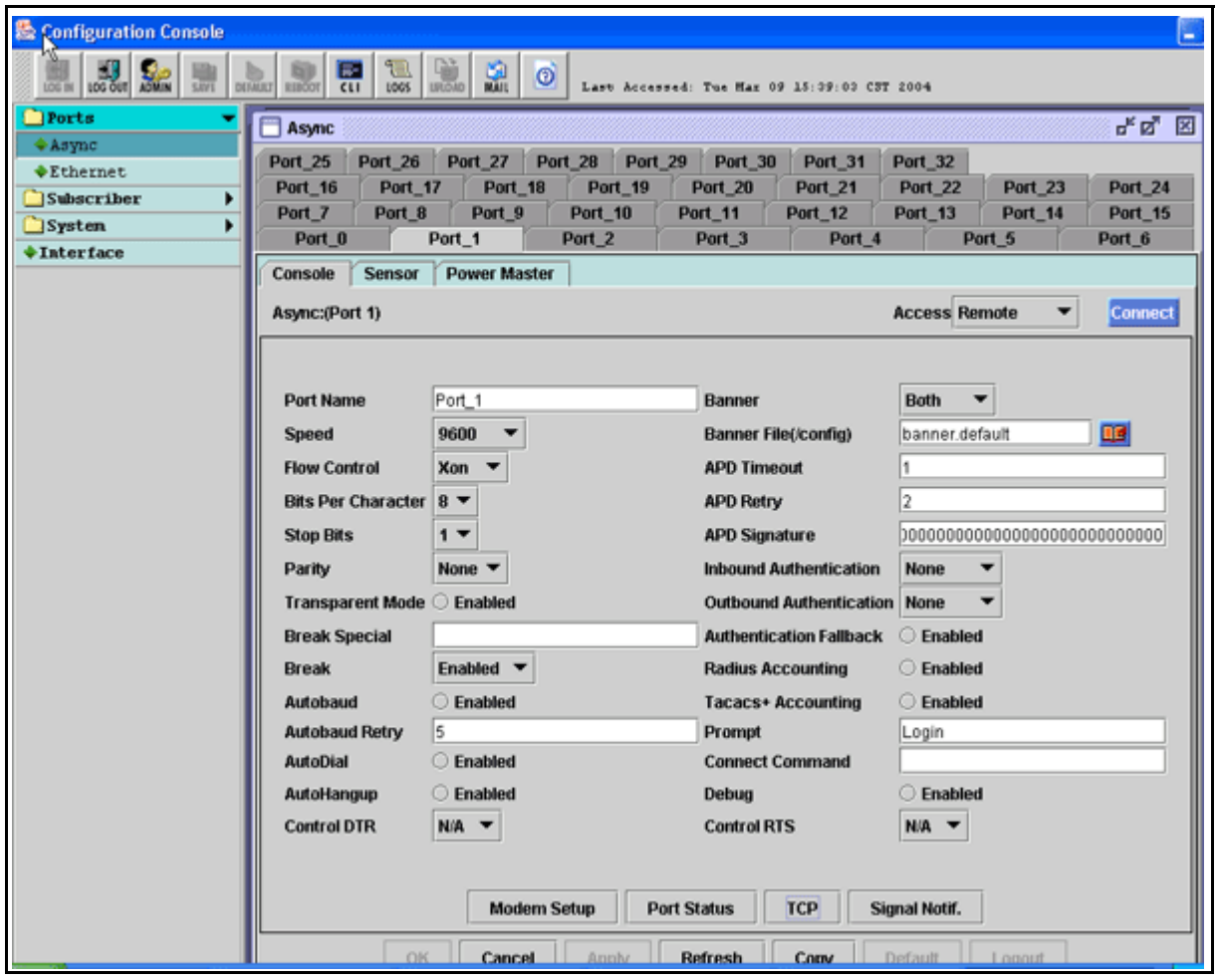
Figure 13 User login window



8 To log in as a superuser, click the **Admin** button on the tool bar and log in with the default Superuser password system. You can now configure the unit at the GUI.

9 Click on the menus on the left side of the window. For example, selecting **Ports: Async** opens the Async ports window.

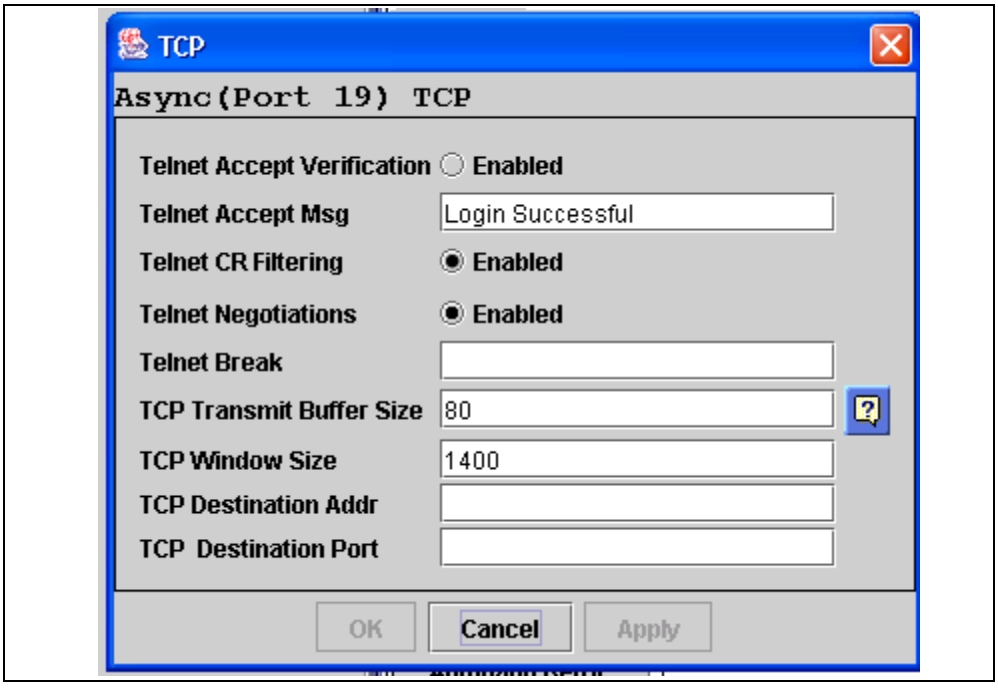
Figure 14 Example: selecting Ports: Async



a When you click on a port, the following dialog box appears for you to enter your information.

Note: In the TCP window (see Figure 15), ensure that both the Telnet CR Filtering radio button, and the Telnet Negotiations radio button are **Enabled**.

Figure 15 Port 19 dialog box



For details on using the IP Configuration Menu, refer to “Using the IP Configuration Menu” in the LX-Series Configuration Guide.

For information on how to boot your unit from defaults, refer to “Booting from Defaults” in the LX-Series Configuration Guide.

Procedure 6 Connecting through the server to the MRV LX terminal server

At the management pc,

1

> **ATTENTION**
> MRV Communications recommends that you change the default password for the user's MRV LX terminal server before you put the unit on a network. For more information, refer to Changing the password defaults on page 40.

Use the following procedure to access the command line interface port from a dumb terminal attached to an LX Series serial port, which is set for access local or dynamic:

a Hit the return key several times to autobaud (if autobaud is enabled) the port and get the login prompt.

b Enter your login name. The default is *InReach*.

c Enter your password. The default is *access*.

Procedure 7 Changing the password defaults

At the management pc,

1 The default password for the MRV LX terminal server user is *access*. If an unauthorized user knew this username/password combination, that user could log on to your unit. For this reason, you should change the user's password to something other than *access*.

The default Superuser password is *system*. To reduce the risk of an unauthorized user gaining access to the Superuser Command Mode, MRV recommends that you change this password to something other than *system*.

To change the user-level password, access the Configuration Command Mode.

2 Access the Subscriber Command Mode for the subscriber by entering the subscriber command with **InReach** as the command argument; for example: **Config:0 >>subscriber InReach**

3 Enter the password command at the `Subs_InReach >>` prompt.

4 Enter a new user password at the `Enter your NEW password:` prompt. The password will be displayed as asterisks.

5 Re-enter the new user password at the `Re-Enter your NEW password:` prompt. The password will be displayed as asterisks.

6 To change the superuser password for the unit, do the following:

a Access the Configuration Command Mode.

b Enter the password command at the Config:0 >> prompt.

c Enter a new superuser password at the `Enter your NEW password:` prompt. The password will be displayed as asterisks.

d Re-enter the new superuser password at the `Re-Enter your NEW password:` prompt. The password will be displayed as asterisks.

Procedure 8 Accessing the MRV LX terminal server

At the management pc,

1 Select **Start -> Programs -> Accessories -> Communications -> HyperTerminal.exe**

2 Name the HyperTerminal Session: **termserv** `[Enter]`

3 Ensure that the appropriate COM port is set and that the terminal emulation is set to `VT100`.

Note 1: You may be asked for the following parameters:

- 9600 baud rate
- 8 data bits / second
- parity - None
- stop bit - 1
- Flow control - None

Note 2: Press **Enter** until you receive a log-in prompt. You may need to press **Enter** several times before the prompt appears.

4 Log in to the HyperTerminal: **access** `[Enter]`

Note: The letters do not appear when you type them. You are typing them in blind.

5 Enter your username: **admin** `[Enter]`

6 To change security at the prompt, type **set priv** `[Enter]`

7 Enter your password: **system** [Enter]

8 Define server ip address **<IP address of the terminal server>** [Enter]

9 Define server ip subnet mask **<ip-address of the subnet mask>** [Enter]

10 Define server ip primary gateway address **<ip address of the primary gateway>** [Enter]

11 Define port:**<select port from range 1-18> telnet newline filtering cr** [Enter]

Note: Type a range [1-18] for every port the Sun Fire V100 server is connected to.

12 Define port for use with SMDI: Define port 19 telnet newline filtering none

Note: You can verify the ports with the command:**show ports 1-19 telnet chara [Enter]**

13 Save your changes.

14 Log out.

Note: Using the command **define** saves the configuration.

15 To kill a session on a port, type: **logout port 12** [Enter]

Procedure 9 Connecting a server to the MRV LX terminal server

ATTENTION

The procedures in this document assume that you are using PuTTY. It is suggested that you download from the web, PuTTY VT 100 Emulator, a freeware configurator tool to set up sessions.

Download PuTTY from
www.chiark.greenend.org.uk/~sgtatham/putty/

At the management pc,

1 Connect a cat-5 Ethernet cable from the management PC to the layer-2 switch.

2 Launch PuTTY.

Note: Refer to the customer-specific information datasheet to enter the MRV LX terminal server IP address and the port number.

3 In the hostname field, enter <IP address of the MRV LX terminal server>

4 For port, enter <the port number which corresponds to A/LOM (Serial A) on the V100 and the MRV LX terminal server>.

Note 1: For LOM ports, use terminal server ports 2100-2400 (physical ports 1-4). For Serial ports, use terminal server ports 3100-3400 (physical ports 11-14).

The port number identifies the location of the target host. This value is based on the following formula: 2000 + (Port number physically connected on the MRV LX terminal server x 100). For example, if the target host is connected to port 9 of the MRV LX terminal server, then the port number would be 2900.

Port 12 is the port on the back of the MRV LX terminal server that translates to 3200.

Note 2: Once the connection is established to the target host, the communication between the user and the component is treated exactly like a console connection.

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Powering on the servers

Procedure 10 Powering on the servers

At the server,

1

ATTENTION

Do not have any bootp servers on the same subnet of the system. If there is such a server, disconnect the LAN interface cable from the system subnet.

Turn power on to the server.

2 If the system boots up, log into the server as *root*.

3 Type **init 0** [`Enter`].

This will bring you to the boot (>ok) prompt. If the system does not have Solaris installed, it will power up to the >ok prompt. You may have to send a break to get the >ok prompt. The servers will more than likely boot up to a Solaris System Identification screen. *Do not* answer those questions. Send a break to get to the >ok prompt so you can then boot from the CD-ROM.

Procedure 11 Power on to get the >ok prompt

At the management pc,

1 If you are using PuTTY, click the program icon in the upper left PuTTY title bar to access PuTTY's pull-down menu.

2 Mouse over the telnet command menu item to access additional drop-down menu options.

3 Select **Break** to send the break command from the PuTTY session.

4 The >ok prompt appears.

ATTENTION
If you do not use PuTTY, use the appropriate key sequence to send a break to the server to get an >ok prompt.

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Installing Disks 1 to 3

ATTENTION
Refer to the customer-specific information datasheet for host name, IP addresses, subnet masks, and so on.

ATTENTION
For installation on a brand-new machine, connect through the terminal server to the A/LOM port until after you have installed CD5. Then log out.

Log back in through the terminal server to B/Serial port for the rest of the installation.

For installations on machines that have already had a system installed, just remain on the B/Serial port.

ATTENTION
The first time you connect to a server, it generates a PuTTY Security Alert. Select *Yes* from the dialog box that appears. You will then be asked to log in. Use your nortel account and enter the password you have set. The passwords are time sensitive and will expire after the set number of days.

Installing CD1

Approximate time estimate = 45 minutes

Procedure 12 Installing CD1

At the management pc,

1 Place CD1 in the CD-ROM drive.

2

ATTENTION
Make sure you put spaces before and after the hyphen: boot [space] cdrom [space] - [space] install.

At the >ok prompt, boot the system: `boot cdrom - install [Enter]`

Note 1: For instructions on how to get to the >ok prompt, see Powering on the servers on page 45.

Note 2: You must wait several minutes before information begins to appear.

Select a Language

3 To select zero [0] for English,

`0 [Enter]`

Select a locale

4 To select zero [0] for English,

`0 [Enter]`

What type of terminal are you using?

5 Select three [3] for DEC VT100,

`3 [Enter]`

Note: The following message is displayed: `The system is coming up. Please wait.`

ATTENTION
Ignore any time zone and syntax errors you receive. You will set the time zone and additional information in the next procedure.

Solaris Installation Program Page

1 Press **Esc**, then press the number **2** [**Esc+2**] to continue.

Note: If you are using a direct console connection to the SUN terminal, use the F2 key.

2 Press **Esc+2** to continue.

Network Connectivity/Networked

3 Accept the default `Yes` by pressing **Esc+2** to continue.

DHCP/Use DHCP

4 Accept the default `No` by pressing **Esc+2** to continue.

Primary Network Interface /Primary Network Interface

5 Accept the default `dmfe0` interface by pressing **Esc+2** to continue.

Host name/Host name

6 Enter the host name of the server, for example: `micromgmt`

Note 1: Host name cannot start with a number. Host names must be at least two characters and can contain alphanumeric characters and minus signs (-).

Note 2: Host names must be unique within your domain. Creating a duplicate host name will cause problems on the network after you install Solaris.

Press **Esc+2** to continue.

IP Address

7

ATTENTION

Make sure you enter the *machine* logical IP address for this system. It must be unique and follow your site's address conventions.

Enter the machine logical IP address.

Example: 120.120.13.25

Press **Esc+2** to continue.

Subnets/System part of a subnet

8 Accept the default `Yes` by pressing **Esc+2** to continue.

Netmask/Netmask

9

ATTENTION

Do not accept the default unless you are sure it is correct for your subnet.

Enter the subnet mask, for example: `255.255.255.0`.

Press **Esc+2** to continue.

IPv6/Enables IPv6

10

ATTENTION

IPv6 is not supported.

Accept the default `No`.

Press **Esc+2** to continue.

There is a slight delay between screens. Please *wait*.

Confirm information

11 Ensure all fields are filled correctly. Press **Esc+2** to continue.

Press **Esc+4** if you need to change anything.

Configure Security Policy

12 Confirm the Kerberos information by accepting the default `No`. Press **Esc+2** to continue.

Confirm information

13 Ensure all fields are filled correctly. Press **Esc+2** to continue. You will see the message `Starting remote procedure call (RPC) services: sysidnsName Service.`

Name Service/Name Service

14 Confirm the name service information by using the down arrow key to navigate to `None`. Press the Return key. Press **Esc+2** to continue.

Continuing the process

15 Confirm your information. Ensure all fields are filled correctly.

Press **Esc+2** to continue.

Press **Esc+4** if you need to change anything.

16 At the **Regions** prompt, select the country where the system is going to be deployed. Use the arrow keys to navigate to the required country and press the spacebar to mark your choice. Ignore time zone syntax errors.

Press **Esc+2** to continue.

17 At the **Time zones** prompt, select the time zone (for example, **Central** for the Richardson, Texas, area) where the system is going to be deployed. Use the arrow keys to navigate to the required time zone and press the spacebar to mark your choice.

Press **Esc+2** to continue. Please wait for the next prompt.

18 At the **Date and time** prompt, set up the date and time.

Press **Esc+2** to continue.

19 Confirm information. Ensure all fields are filled correctly.

Press **Esc+2** to continue and wait for the message: `System identification is completed.`

20

ATTENTION

Make the following selection very carefully. If you make a mistake at this point, you will need to start over, beginning with Powering on the servers on page 45. The selection of the number depends on the configuration type.

You will see the following message. Select the 2-server Micro Configuration (1) option, then press **Enter**:

```
*******************************************
1) 2-server Micro Configuration
2) 4 or 4+ Standard Configuration
*******************************************
```

You will see the message `Creating disk profile for standard <number of servers> server system.`

21

> **ATTENTION**
> *Make the following selection very carefully.* If you make a mistake at this point, you will need to start over, beginning with Powering on the servers on page 45. The selection of the number depends on the server type.

You will see the following message:

```
*********************************************
Choose Application configuration:
1) AppSvr/IPCM/Websvr/WCM
2) Management/Accounting/Oracle/DB
*********************************************
```

Select your required server type, then press **Enter**.

Note: Select option 1 for the IPCM, SIP Application Module, Web Client Manager, Provisioning Module, Web Client Manager, and H.323 Gatekeeper.

You will see the message `Creating disk profile for <selected server>.`

22 The install script will begin executing. The system will reboot upon completion of the install script. Wait until you receive the login prompt.

23 You will be prompted to type in the root password twice. The password will not appear on the screen when you type. If you do not want a root password, press **Enter** twice. Press **Enter** to continue.

Note: The CD will eject from the CD-ROM. The system then requests that you insert CD2.

> **ATTENTION**
> If you are not prompted for CD2, contact support.

Installing CD2

Approximate time estimate = 15 minutes

Procedure 13 Installing CD2

At the management pc,

1. Place CD2 in the CD-ROM drive and press **Enter**. You will see a number of messages requiring no specific answer. Press **Enter** following each one.
2. You will then see the following message: `What type of installation are you performing? 1=Typical; 2=Custom`Type **1** and press **Enter**.
3. You will then see the following message: `Ready to Install: Install Now, Start Over, Exit Installation` Type **1** for `Install Now` and press **Enter**.
4. Press **Enter** several more times to complete the License Agreement. Enter **Y** to accept the license.

   Note: You will now see a progress bar showing percent of installation completed.
5. You will then be asked to choose 1 for Live Install or 2 for Done. Accept the default `2-Done` by pressing **Enter**.

   Note 1: CD2 will eject from the CD-ROM drive when installed.

   Note 2: The system will reboot and come up requesting that you insert MCS Base Platform System Software CD3.

ATTENTION
If you are not prompted for CD3, contact support.

Installing CD3

Approximate time estimate = 90 minutes

Procedure 14 Installing CD3

At the management pc,

1

ATTENTION

Wait for the login prompt to appear. The script will execute after you press *Enter*.

Place CD3 in the CD-ROM drive and press **Enter** at the prompt. The installation will continue. Please wait. The system will prompt you for the next step.

2 Log in as *root.* `[Enter]`

3 Enter your `<customer-specific password> [Enter]`

Note 1: CD 3 will eject from the CD-ROM when installed.

Note 2: You will be prompted to insert CD4.

ATTENTION

If you are not prompted for CD4, contact support.

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Installing Disk 4

ATTENTION
The following sections describe installing CD4 according to the specific server type. Please note that there are some small, but very important, differences in the installation of the two types of servers (database/accounting/management or application server).

Database/Accounting/Management server (DBSvr, AcctMgr, MgmtSvr)

Approximate time estimate = 30 minutes

Procedure 15 Installing CD4

At the management pc,

1 Place CD4 in the CD-ROM drive and press **Enter** to continue. *Wait* until you see the following statement appear:

```
"You are now configuring the NTP time source for
this server. The servers which run the
Management and Accounting service will be the
source. You will need to provide the Machine
Logical IP Address of each server. If running
simplex mode, provide the same address twice."
```

2 Press **Enter** to continue.

3 You will see the following message:

```
The Management server requires an external
clock.
Select External Clock for  time source external
to the Management server.
Select Internal Clock  for the Managment server
```

to use the local system clock as the time source.

Note: Select Time Source

- X - External Clock Device
- E - External Clock Source {IP Address(es)}
- I - Internal Clock (Unreliable)

Select option from list above [E, I, X]

4

ATTENTION
Refer to the CSI for NTP time source IP information.

Select one of the options, then press **Enter**.

If you select X - External Clock Source, you will see a list of clock types. Select the type you have or none (99).

If you enter I - Internal Clock, then enter the MACHINE Logical IP Address of the Management/Accounting server:

If you select E for External time source, you will be prompted as follows: How many external clock sources would you like to reference [1]? Enter **1**.

You will then see the following message:

External Clock Source IP Address #1: Enter your clock source IP address, for example: 120.120.12.220

5 You will see the following message: "Enter the MACHINE logical IP address of the other Accounting Server."

Enter the <primary machine logical IP address of the other accounting server> [Enter]

Example: 120.120.13.22

6 You will see the following message:
You have chosen to configure NTP as follows:
Type of server: Management
Using external Time Source(s): 120.120.12.220
NTP SOURCE (Accounting IP address): <ex: 120.120.13.22>
Is the above configuration correct (y/n):
Select **Y** to continue or **N** to change.

7 Press **Enter** to continue.

8 You will see the following statement:

```
"You are now configuring IPMP (Multipathing)"

"Please have the Database Server Physical IP
addresses and the Machine Logical IP address
ready. Have 6 IP addresses that can be used as
ping buddies." Recommendations for ping buddies
are provided.
```

9 Press the **Enter** key to continue.

10 When you see the IP multipathing configuration for Sun Solaris information appear, press **Enter** to accept it or type in a preferred setting. The default failover timeout is set to 1000mSec.

11 Enter the primary machine physical IP address for the dmfe0 interface: `<Physical IP address of the dmfe0 interface> [Enter]`

Example: 120.120.13.20

12 Enter the secondary machine physical IP address for the `dmfe1` interface:
`<Physical IP address of the dmfe1 interface> [Enter]`

Example: 120.120.13.21

13 Enter the `<machine logical IP addresses of the servers>` that are the ping targets.

> ***Note:*** Do not enter the IP address of the server you are working on.

IP Multipathing needs a set of reliable hosts to ping against. Select a set of three IP addresses in this subnet that belong to reliable nodes (such as fault tolerant servers). Select the three nodes from the following list, in order of preference:

For IPMP GROUPS:

- Machine Logical IP address of the database server
- Machine Logical IP address of the Management server
- Machine Logical IP address of the CAM server
- BPS stack IP address
- Other optional devices (PRI Gateway host)

Provide between two and six ping targets or each IPMP group for proper IPMP failover reliability. Enter the address "0.0.0.0" to indicate list is complete, if entering less than six targets.

Enter ping target #1: 120.120.13.25

Enter ping target #2: 120.120.13.1

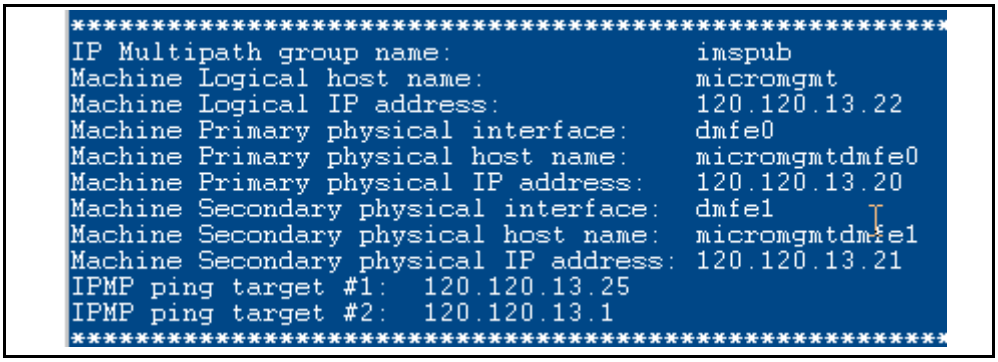
Enter ping target #3: 0.0.0.0

Note: Do NOT use this server's own IP address as a ping target.

Press **Enter** after each IP address.

14 The configuration information will come up as shown in the following figure:

Figure 16 Database/Management/Accounting server IPMP configuration summary




```
Is this IPMP group configuration acceptable?
(Y/N)
```

Select **Y** and press **Enter**.

15 The default route IP address should appear. If correct, press **Enter**. Otherwise, type it in, then press **Enter**. Example: 120.120.13.1

Note: If your configuration does not include a router, then enter the machine logical IP address of your server.

16

```
You are now configuring Management Server or
Accounting Server Service Failover. Please have
the Management Server System Manager and
Accounting Server Accounting Manager Service
Logical IP addresses and the Machine Logical IP
addresses ready.
```

Press **Enter** to continue.

You will see the following message:

```
Obtaining IP Addresses for SysMgr/AcctMgr
Failover Operation
```

Note: If you don't have plan to configure the failover service, type in the same primary service logical IP address and primary machine logical IP address or type 0.0.0.0 instead.

17 Enter the `<Machine Logical IP Address of the other MgmtSvr> (in dot-notation format).`
Example: 120.120.13.22

18 Enter the `<service logical IP address of the SysMgr> (in dot-notation format).`
Example: 120.120.13.22

19 Enter the `<service logical IP of the AcctMgr> (in dot-notation format).`
Example: 120.120.13.22

```
"You have entered the following IP addresses:
Machine Logical IP Address of the other MgmtSvr:
120.120.13.22
Service Logical IP Address of SysMgr:
120.120.13.22
Service Logical IP Address of AcctMgr:
120.120.13.22
```

20 `Is this information correct? (y/n)`
If the information is correct, press **Y** and **Enter**.

21 `You are now configuring the Syslog daemon.` Press **Enter** to continue.

22 `Is this the Redundant Configuration Accounting Server Machine [Y/N]?` Select **N**.

The system will now reboot and come up requesting that you insert CD5.

CD4 will eject from the CD-ROM drive when installed.

ATTENTION
If you are not prompted for CD5, contact support.

Application servers (SIP Application Module, IPCM, Web Client Manager, Provisioning Module)

Approximate time estimate = 15 minutes

Procedure 16 Installing CD4

At the management pc,

1 Place CD4 in the CD-ROM drive and press **Enter** to continue. WAIT until you see the following statement appear:

```
"You are now configuring the NTP time source for
this server. The servers which run the
Management and Accounting service will be the
source. You will need to provide the Machine
Logical IP Address of each server. If running
simplex mode, provide the same address twice."
```

2 Press **Enter** to continue.

3 You will see the following message: `"NTP Source 1: Enter the MACHINE Logical IP Address of the Management Server:`

Enter the IP address, for example: 120.120.13.22

4 You will see the following message: `"NTP Source 2: Enter the MACHINE Logical IP Address of the Accounting Server:`

Enter the IP address, for example: 120.120.13.22

5 You will see the following message:

```
You have chosen to configure NTP as follows:
Type of server: Application
NTP SOURCE (Management IP address):
120.120.13.22
NTP SOURCE (Accounting IP address):
120.120.13.22
Is the above configuration correct (y/n):
```

Select **Y** to continue or **N** to change.

6 Wait until you see the following message:

```
You are now configuring IPMP (Multipathing)
Please have the Application Servers (Appsvr,
IPCM, WebSvr, WebClientMgr) Physical IP
addresses and the Machine Logical IP address
ready. Have 6 IP addresses that can be used as
ping buddies. Recommendations for ping buddies
are provided.
```

7 Press **Enter** to continue.

8 When you see the IP multipathing configuration for Sun Solaris information appear, press **Enter** to accept it or type in a preferred setting. The default failover timeout is set to 1000mSec.

9 Enter the primary machine physical IP address for the dmfe0 interface: `<Physical IP address of the dmfe0 interface>`

Example: 120.120.13.23

10 Enter the secondary machine physical IP address for the dmfe1 interface:
`<Physical IP address of the dmfe1 interface>.`

Example: 120.120.13.24

11 Enter the `<machine logical IP addresses of the servers>` that are the ping targets.

Note: Do not enter the IP address of the server you are working on.

IP Multipathing needs a set of reliable hosts to ping against. Select a set of three IP addresses in this subnet that belong to reliable nodes (such as fault tolerant servers). Select the three nodes from the following list, in order of preference:

For IPMP GROUPS:

- Machine Logical IP address of the database server
- Machine Logical IP address of the Management server
- Machine Logical IP address of the CAM server
- BPS stack IP address
- Other optional devices (PRI Gateway host)

Provide between two and six ping targets or each IPMP group for proper IPMP failover reliability. Enter the address "0.0.0.0" to indicate list is complete, if entering less than six targets.

Note: Do NOT use this server's own IP address as a ping target.

12 Press **Enter** after each IP address, for example: `0.0.0.0 [Enter]` (This is the third ping target machine logical IP address.).

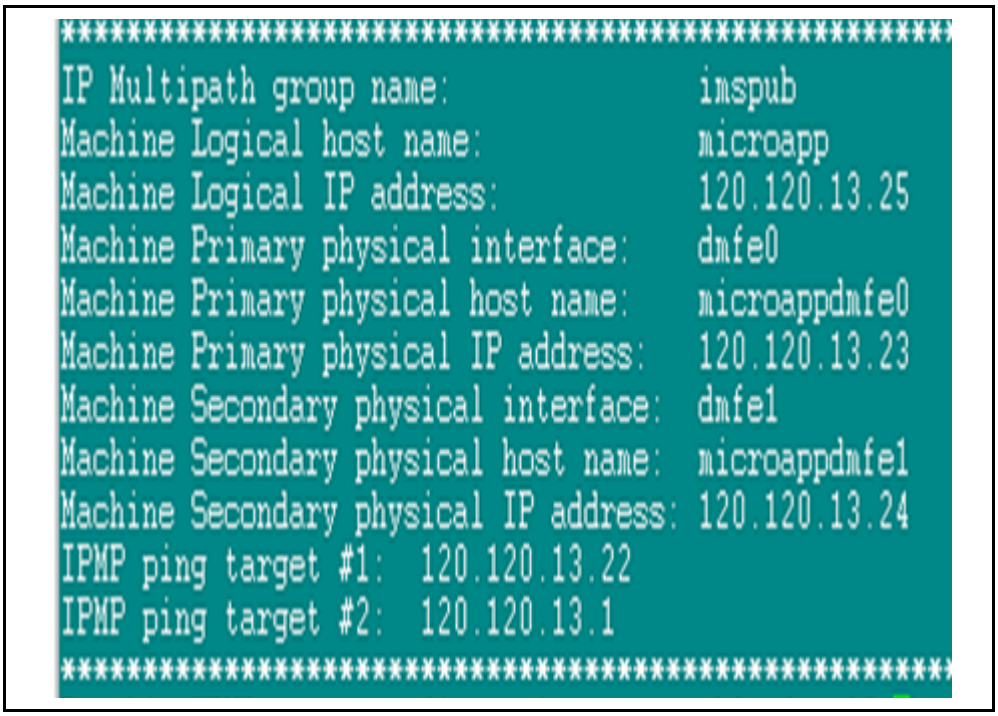
Example

```
Enter ping target #1: 120.120.13.22[Enter]
Enter ping target #2: 120.120.13.1[Enter]
Enter ping target #3: 0.0.0.0 [Enter]
```

Note: 0.0.0.0 ends the ping target list.

13 You will see the configuration summary appear as shown in the following figure:

Figure 17 Application server IPMP configuration summary



`Is this IPMP group configuration acceptable? (Y/N)`
Select **Y** to accept or **N** to change.

14 The default route IP address should appear. If correct, press **Enter**. Otherwise, type it in, then press **Enter**.

Note: If your configuration does not include a router, then enter the machine logical IP address of your server.

15 `Do you intend to deploy the Web Server to this machine (y,n)?` Enter **Y**.

16 `You are now configuring the Syslog Daemon.` Press **Enter** to continue.

17 `Does the Management Server have a SysMgr Service Logical IP Address [Y/N]?` Select **N**.

The system will now reboot.

ATTENTION
If you are not prompted for CD5, contact support.

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Installing Disk 5 (all servers)

Approximate time estimate is 30 minutes.

Procedure 17 Installing CD5

At the management pc,

1 Place CD5 in the CD-ROM drive, on the server, and press **Enter** at the prompt.

Note 1: CD5 will eject from the CD-ROM when installed.

Note 2: For Management/Accounting servers, you will be prompted for CD6. Refer to Installing Disk 6 (MgmtSvr/AcctMgr only) on page 67 for instructions.

Application/IPCM servers (AppSvr/IPCM) will reboot.

2

ATTENTION

On a brand-new machine, only the A/LOM port is available until after CD5 completes. Once CD5 has completed, log out of the A/LOM port.

Log back in through the terminal server to the B/Serial port for the rest of the installation.

For installations on machines that have already had a system installed, just remain on the B/Serial port.

After the AppSvr/IPCM reboot, log into these servers (using the B/Serial port) and change the passwords for the *sysadmin*, *root*, and *nortel* users.

Change the passwords on the MgmtSvr/AcctMgr server after CD6 (not CD5).

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Enabling or disabling the automatic mount

Use the following procedure if you need to use the CD-ROM auto-mount after installation of CD5. Execute this procedure on the MgmtSvr (Server1).

ATTENTION
Keep this procedure for future use.

Procedure 18 Enabling or disabling the CD-ROM auto-mount

At the management pc,

1 The system disables **volmgt** by default after CD5 is installed. To toggle it back on to install additional CDs, follow this step.

Log in as *root* from the console and type the following command: **/etc/init.d/volmgt start**

2 When you finish mounting the additional disk(s), remember to disable the volume manager for better security. To disable it, use the following command: **/etc/init.d/volmgt stop**

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Installing Disk 6 (MgmtSvr/AcctMgr only)

ATTENTION

CD6 *must* be installed on the MgmtSvr and on the AcctMgr machines only. If you do not install CD6, you will not be able to deploy or start the secondary MgmtSvr or AcctMgr.

Approximate time estimate = 30 minutes

Procedure 19 Installing CD 6

At the management pc,

1 Place CD6 in the CD-ROM drive, on the server, and press **Enter** at the prompt.

Note: CD6 will eject from the CD-ROM when installed.

2 After the reboot, log in (using the B/Serial port) and change the passwords for the *sysadmin*, *root*, and *nortel* users.

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Installing Oracle 9.2.0.4 on the database server

The procedures to install Oracle 9 on the DBSvr include storing Oracle 9 CDs 1-6 to your local hard drive. Refer to the section that follows.

Approximate time for loading Oracle 9 = 90 minutes

ATTENTION
Refer to the CSI datasheet for such items as the hostname, IP addresses, and subnet masks.

ATTENTION
Perform these steps on all servers in parallel if multiple CDs are available.

Installing Oracle 9.2.0.4

Procedure 20 Installing Oracle 9.2.0.4 on the database server (DBSvr)

At the management pc,

1 Use PuTTY to connect to the database server using Serial port B, which connects to the LX terminal server.

Log in as *root* to the database server.

2 Enter your `<customer-specific password>`.

3 Insert Oracle 9.2.0.4 CD 1 into the CD-ROM drive on the server.

4 **cd [space] /cdrom/cdrom0** `[Enter]`

5

ATTENTION
Make sure you put a space before the ending slash (/) in step 5.

cp [space] Install_CD_to_Disk [space] / `[Enter]`

6 **cd [space] /** `[Enter]`

7 **./Install_CD_to_Disk** `[Enter]`

8 `Storing data from CDs to the /IMS/ora_cds directory [Y]?:` Select **Y** `[Enter]`

9 Please insert Oracle Disks [2-6] into the CD-ROM drive [Enter]

Note: You will receive the following prompts for each CD entered:

```
Copying files from CDROM to /IMS/ora_cds/Disk [1-6]
```

```
Performing check sum on /IMS/ora_cds/Disk [1-6]
```

10

ATTENTION
Contact support if you do not receive the following response:
`Check sum Oracle Disk [1-6] passed for each Oracle CD inserted into the CDROM.`

ATTENTION
In step 10 you will enter the hostname twice. The sec_db_hostname is the same as the pri_db_hostname for a 42-server non-redundant configuration.

Refer to this table when entering the following command:

Prompt	Definition	Enter
pri_db_hostname	There is only one hostname for a 24-server configuration.	Hostname of the database server, for example, micromgmtDBSvr.
sec_db_hostname	Since there is no secondary server, enter again the pri_db_hostname (Hostname of the database server).	Re-enter hostname of the database server.

cd [space] /IMS/ora_cds/Disk1 `[Enter]`

./Oracle_Install PRIMARY <primarydb-hostname> [space] <secondarydb-hostname>[space] | [space] tee [space] /tmp/oracleinstall.log

11 Enter the password `oracle` at the Oracle prompt. `[Enter]`

12 Retype the password: `oracle [Enter]`

13 Select the database configuration:

1) Enterprise

2) Carrier

Accept the default [**1**]

`[Enter]`

14 `Is the database replicated [N]?` Accept the default [**N**]

`[Enter]`

15 You will then see a confirmation screen. If the information on the screen is correct, type **Y**. Otherwise, type **N** and make the changes.

Note: At this point, the program runs a check sum and untars the files to the local directory. Approximate time: 30 - 45 minutes.

16 Accept the default of the local bin directory: [/usr/local/bin]: `[Enter]`

17 `Removing Disk1,Disk2,Disk3,Disk4,Disk5,Disk6 from /IMS/ora_cds [Y]?:`
Y [Enter]

Failing to answer **Y** will cause the system to raise a disk space alarm on the SysMgr screen for the DBSvr.

You will see the message: `Removing Disk 1, Disk2, Disk3, Disk4, Disk5, Disk6 from /IMS/ora_cds....`

`Oracle_Install Complete.`

18 At the completion of the script, you will see the message: `Oracle_Install complete`

Press **Ctrl-C** to exit.

19 To check for errors, at the prompt, type **cd [space] /tmp** `[Enter]`

20 View the /tmp/oracleinstall.log to see if there are any errors:

grep[space]-I[space]error[space]oracleinstall.log

Note: To check for errors, look for the word “error” in this log file.

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Deploying the initial database load

Prerequisites

Ensure that the MCS Base Platform Software and Oracle 9i have been installed on database servers.

ATTENTION
Refer to your CSI datasheet to enter the IP addresses that you are prompted for in this section.

Deploying the MCS database load (imssipdb)

After performing the steps for installing MCS Base Platform software and Oracle software, an empty imsdb1 database is all that exists. A database load must be deployed on the database machine (Server1) to define all of the MCS schemas and configurations.

Commands are executed on each server using PuTTY SSH into the machine logical IP address (ex.: 120.120.13.25). The procedure to install the database load for the first time is command-line driven and executed from the MgmtSvr.

Example: Open a PuTTY SSH session to Server1 120.120.13.22

Procedure 21 Deploying the initial database load (imssipdb)

At the management pc,

1. Log into the MgmtSvr:

   User name: `<nortel>`

   Password: `<your new password>`

2. Execute the following command: **dbdeploy.pl** `[Enter]`

3. Select the correct database load and press **Enter**.

4. `Is this a Replicated Database?` Enter **N** for a non-redundant system.

5 You will see the following message:

```
Select the Type of Deployment:
[1] Initial Deployment
[2] Upgrade of Database
[3] Rollback of Database
[4] Install Files only
```

to Select **1** for initial deployment, then press **Enter**.

6 `Enter Machine Logical IP Address - Primary DB [No default]:`

Enter the <machine logical IP address of the MgmtSvr>

Example: 120.120.13.22

7 `Enter the Machine Logical IP address - Management Server:`

Enter the <machine logical IP address of the MgmtSvr>.

Example: 120.120.13.22

8 `Enter the Service Logical IP address of the SysMgr:`

Example: 120.120.13.22

Note: Information obtained for database deployment appears on the screen.

9 `Is the above data correct? [Y]`

Press **Y** to select the default or **N** to change.

Note: The imssipdb deployment begins. The installer will notice the PuTTY window scrolling installation information. This is the Management/Accounting server sending the imssipdb data to the database server. Make sure that you receive the "Successful Install" box at the end of the script execution.

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Deploying and starting the Sysmgr

Prerequisites

The dbdeploy.pl script is successfully deployed on the database.

ATTENTION
Refer to the customer-specific information for hostname, IP addresses, subnet masks, and so on.

Deploy the Sysmgr for a non-redundant configuration. The operator logs into the machine logical IP address of the management server. At the UNIX prompt, the operator the uses the script mgmtdeploy.pl to deploy and start the Sysmgr. This process is described in the following section.

Deploying and starting the Sysmgr

Procedure 22 Deploying and starting the Sysmgr

At the management pc,

1 Log into the management / accounting server:

User name: nortel

Password:

<Enter your new password.>

2 At the prompt, type **mgmtdeploy.pl**

3

ATTENTION

When selecting the management server load, always select the load that contains the word "micro" in it. If the non-micro load is selected, the installer will receive an Out Of Memory error.

The server load names are:

- mgmtsvr_all-mico-ims — for a 2-server installation.
- mgmtsvr_all-small-ims — for a 4-server or an 8-server V100 installation.
- mgmtsvr_all_ims — for an 8-server N240 installation.

```
Please enter the correct number of the load to
deploy:
```

Example

```
 [@micromgmt]/export/home/nortel:=>
mgmtdeploy.pl

Obtaining input required to deploy and
configure the mgmtsvr bundle

   Please enter all IP addresses in
dot-notation format

==========================================

Querying DSM for available loads

Select a mgmtsvr load from the following list

[1] mgmtsvr_all-micro_ims_3.0_buildxxxx
[2] mgmtsvr_all-small_ims_3.0_buildxxxx
[3] mgmtsvr_all_ims_3.0_buildxxxx

Please enter the number [1] of the load to
deploy: 1
```

4 `Is the database replicated?` **N** `[Enter]`

5 `Enter Machine Logical IP Address - Primary DB: <machine logical IP address of the database server>`

Example: 120.120.13.22

6 `Enter the Machine Logical IP Address - Mgmtsvr: <machine logical IP address of the management server>`

Example: 120.120.13.22

7 `Will a Motorola SAM16 server (SIP PriGwy or SIP Audio Svr) be deployed? [Y/N]`

Always answer **N** `[Enter]` even if you have a third-party gateway.

Note: Information obtained for deploying the Sysmgr appears.

8 `Is the above data correct? [Y]`
Answer **Y** `[Enter]`

9 `Start up the SysMgr and TSS processes? [Y]`
Answer **Y** `[Enter]`

Note: You must wait until the system returns to prompt since the system does a sleep message as it starts each service. There may be a delay.

Sysmgr deployment verification

After completing step 9 above, the screen will display deployment information. Notice that the script waits 30 seconds between process executions. The script is starting three processes that must be running in order to continue MCS load deployment.

The three processes can be verified by opening a PuTTY SSH session to the management / accounting server.

Example: Open a PuTTY SSH session to 120.120.13.22

Procedure 23 Verifying the Sysmgr deployment

At the management pc,

1 Log into management / accounting server as *nortel / <your new password>.*

2 Execute the following command to verify processes:

[@micromgmt] /export/home/nortel:=> meinit -p

Rel3 NTme_pids mgmtsvr mgmtsvr.3 xxxx

Rel3 NTme_pids tsscma tsscma.5 xxxx

Rel3 NTme_pids tssfpma tssfpma.6 xxxx

Note: The numerical value of the PIDs is shown as "xxxx" because it may vary on each system.

The results of the **meinit** command should display three processes along with their process ids.

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Registering your license key

Before installing the license key as described in Procedure 25, Installing the System Management Console, follow the procedure below to generate and register your license key.

Procedure 24 Registering the license key

At the management pc,

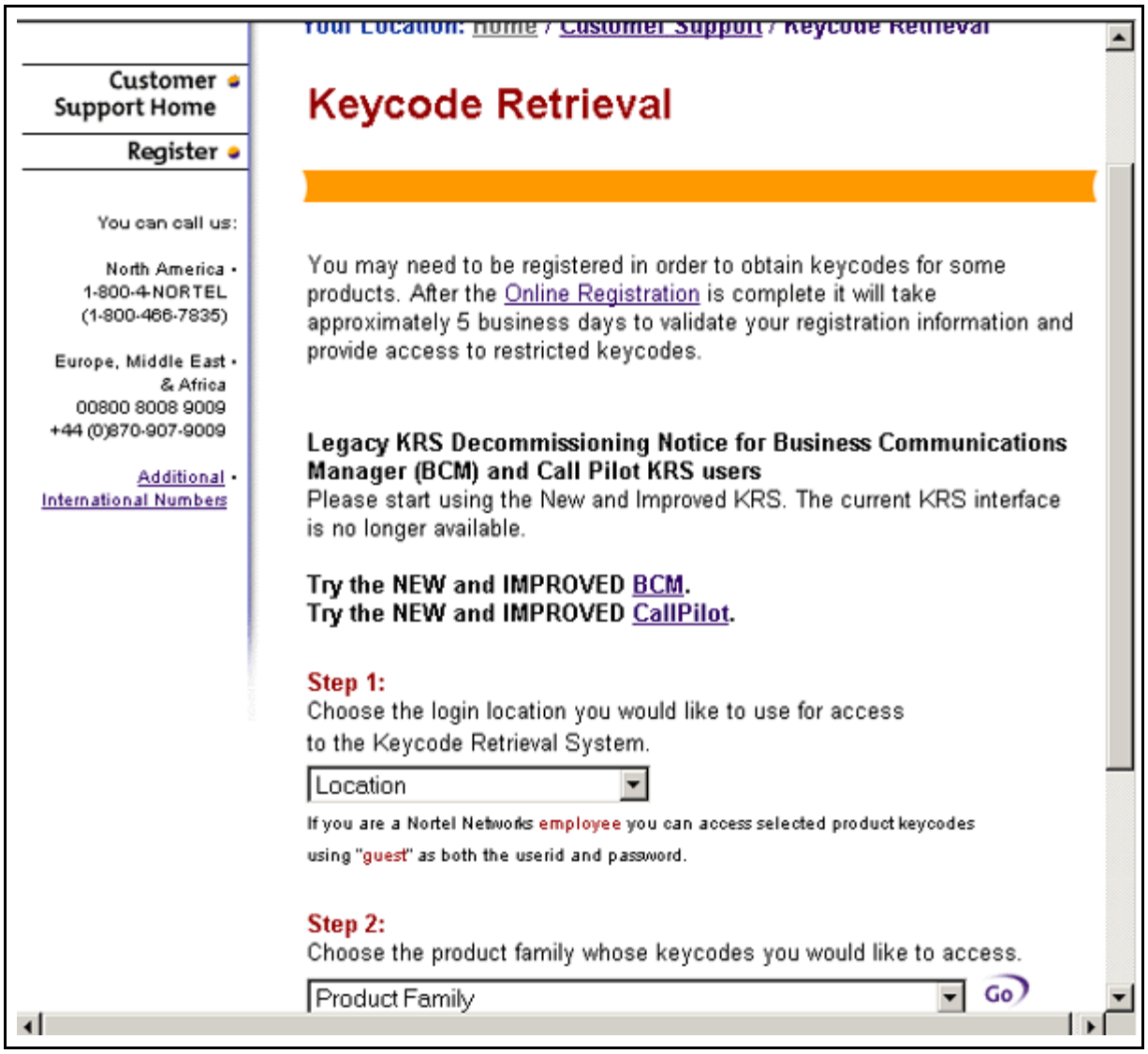
1. Before you can begin generating keycodes, first “Register” (or create) your site on the KRS (Keycode Retrieval System) webpage. The site will normally consist of one or two Management and Accounting servers (this set is called the CORE) and one or more Media Application Servers (MAS).

   Each server has two (2) MAC addresses. First identify those MAC addresses since you will need to identify them to the KRS during the site registration process. The following screen shots show a simple configuration and generation of one keycode for the Management and Accounting servers (CORE).

2. Open your browser and go to www.nortel.com (Internet access is required to carry out this procedure.).

3. From the main page, under Support, click on Keycode Retrieval. This will take you to the secure login page.

Figure 18 KRS login screen

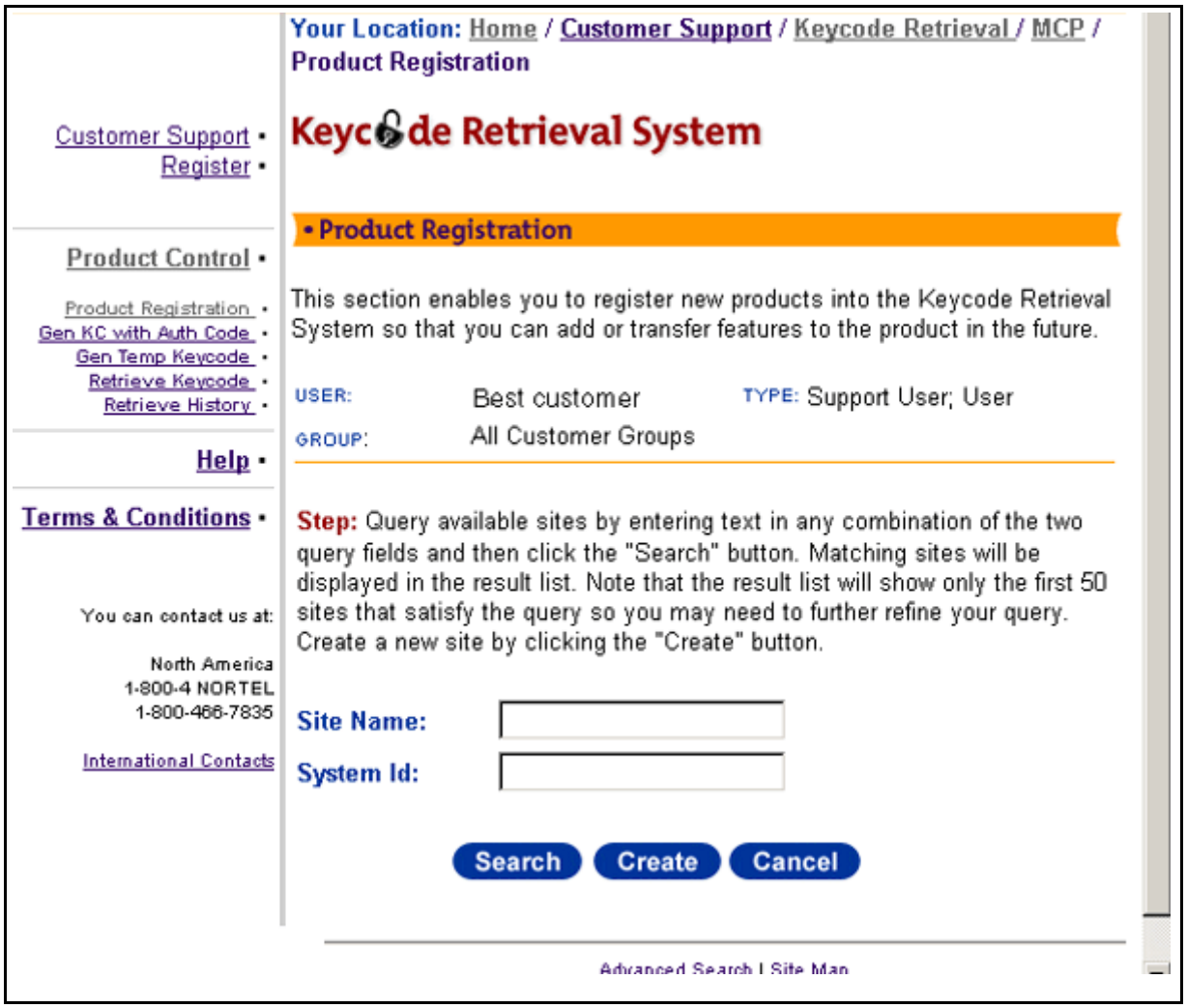


4 In step 1 (Location) select a login server that matches your region, for example, European Login or North American Login.

5 In step 2 (Product Family) select the product you wish to generate keycodes for; in this case, select Multimedia Communication Portfolio.

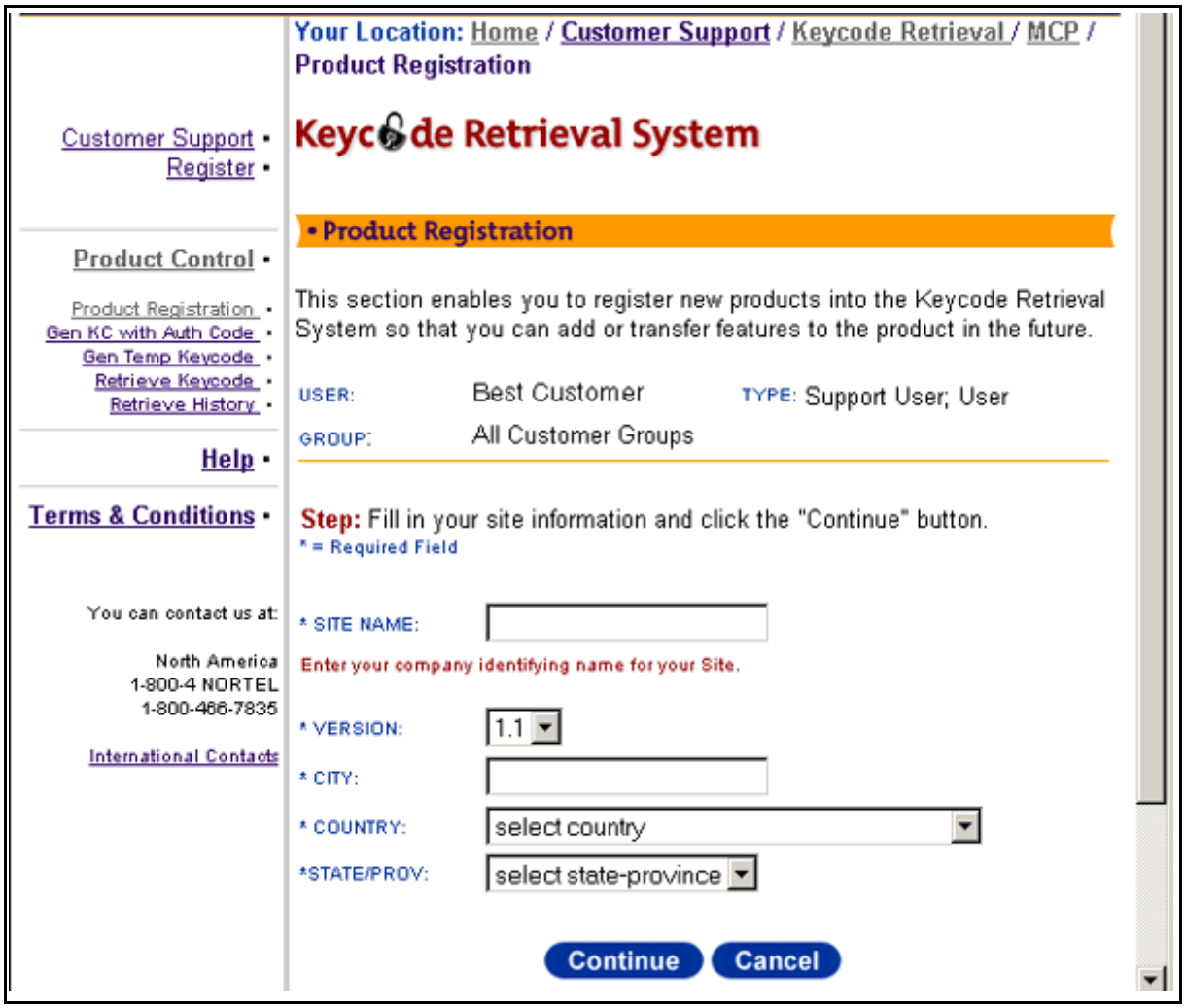
6 Next you will be asked to enter your User ID and Password. The following screen then appears.

Figure 19 Keycode Retrieval System, Creating your site



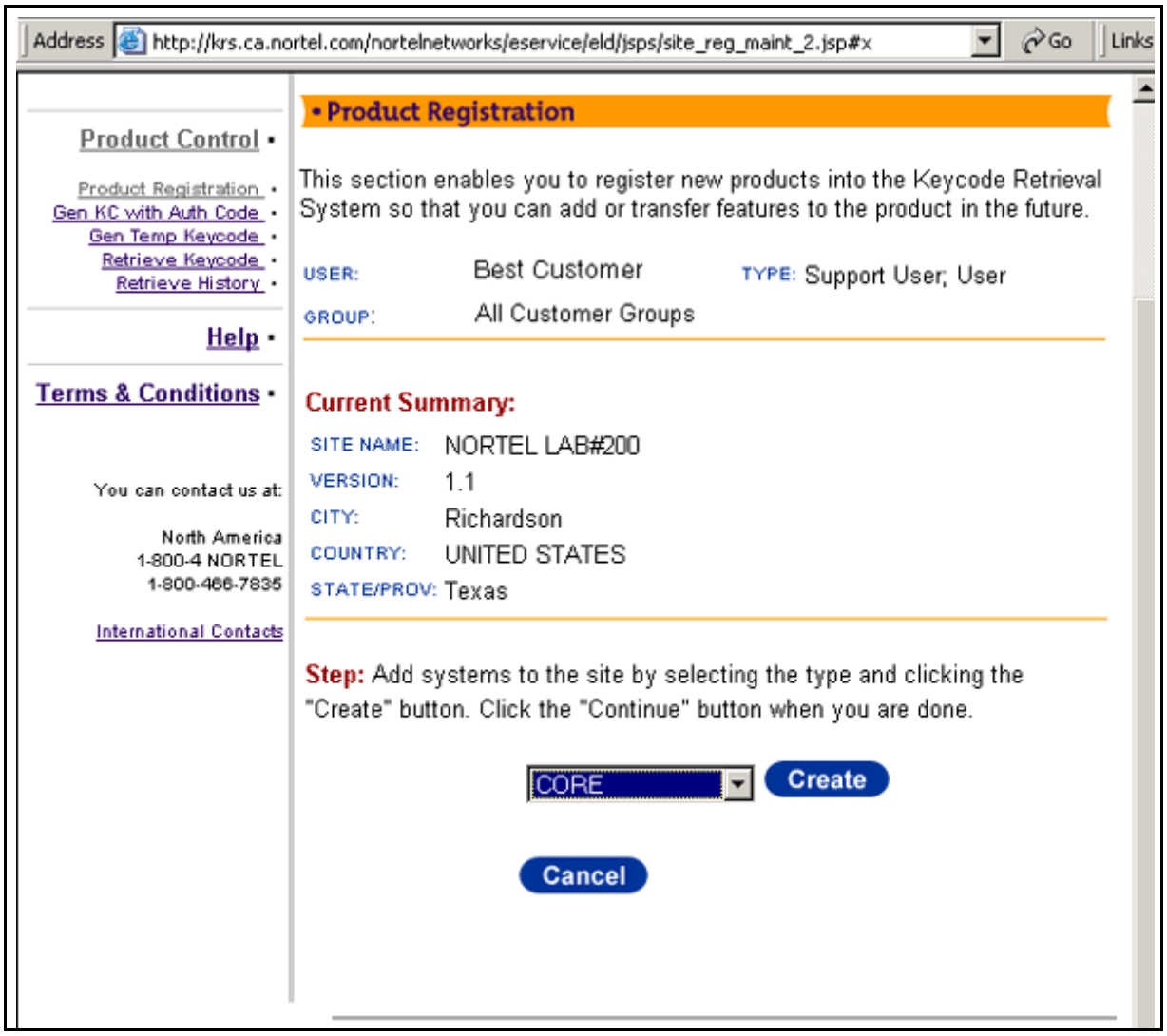
7 Select **Create** to register a new system. The following screen appears.

Figure 20 Keycode Retrieval System, Entering your site information



8 Fill in the requested information and press the **Continue** button. Ensure you choose the correct software version from the dropdown box. Your screen should look like the one in the following figure.

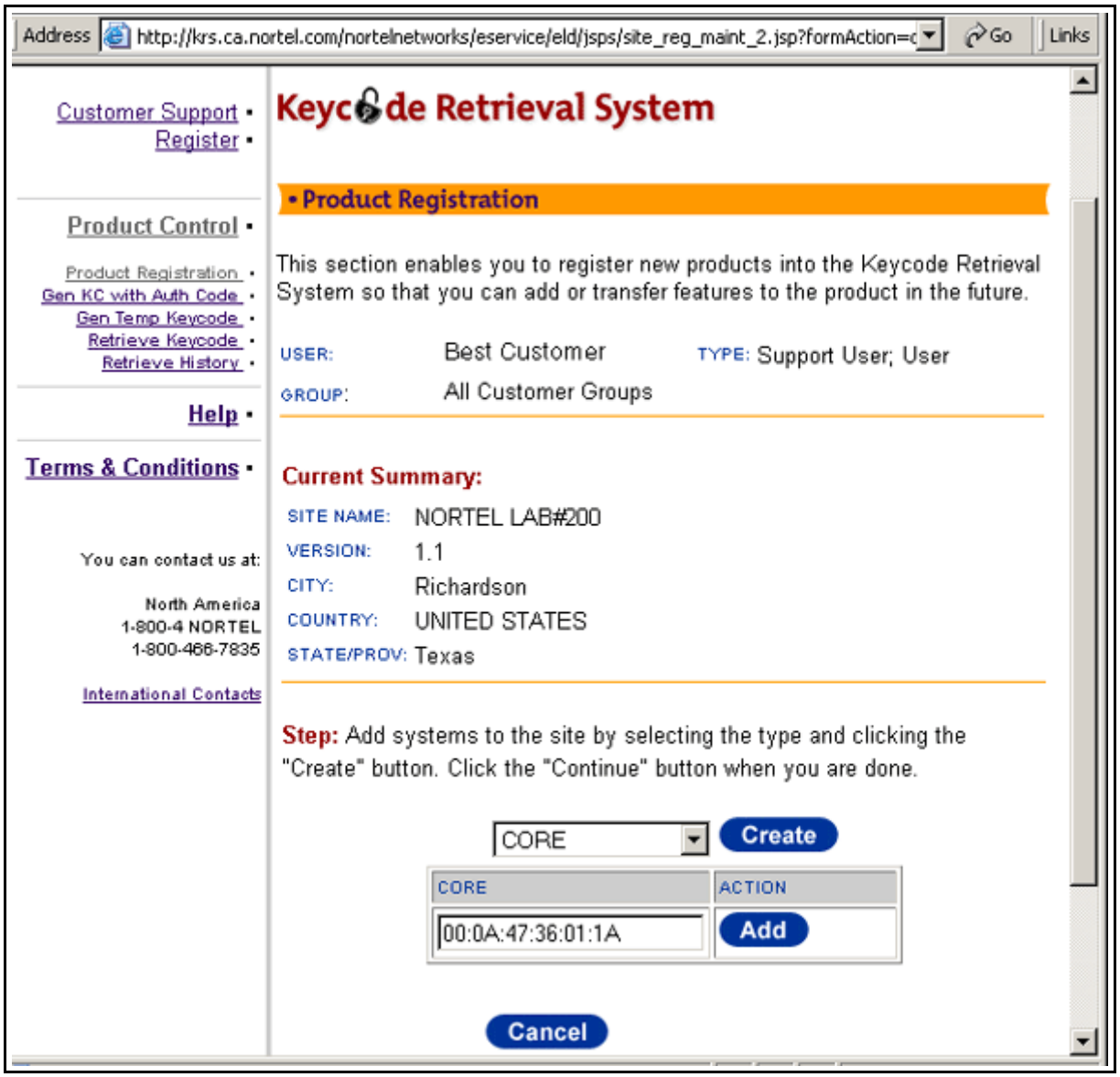
Figure 21 Keycode Retrieval System, Current Summary



9 Select the server you want to enter MAC addresses for first, then click on **Create**.

10 Enter the MAC addresses of the CORE servers and click on **Add**.

Figure 22 Keycode Retrieval System, Adding MAC address



11 Repeat Step 10 for the second MAC address (required). If you make an error, you can remove one or both and begin again. If you have a second Core that is going to be installed as a redundant server enter all four MAC addresses at this time.

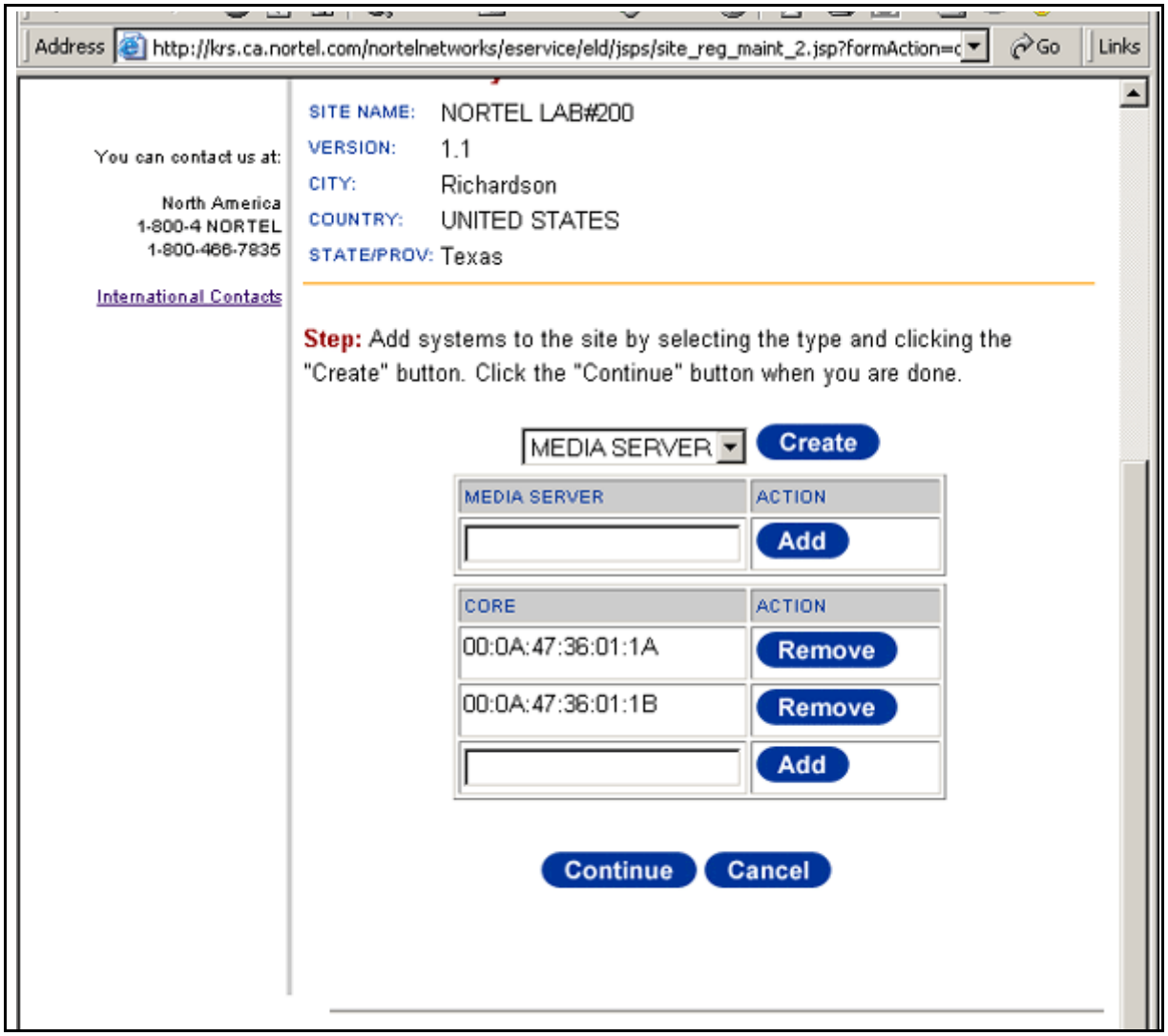
12 When finished you will need to select **Create** again to enter the Media Application Server's MAC addresses, enter those just as you did in Step 10.

13 Enter both MAC addresses of the Media Application Server, if you are installing one, and click **Continue**. For more information on the Media Application Server, refer to the Media Application

Server Service Guide applicable to your system (see the Overview chapter for a listing of the service guides).

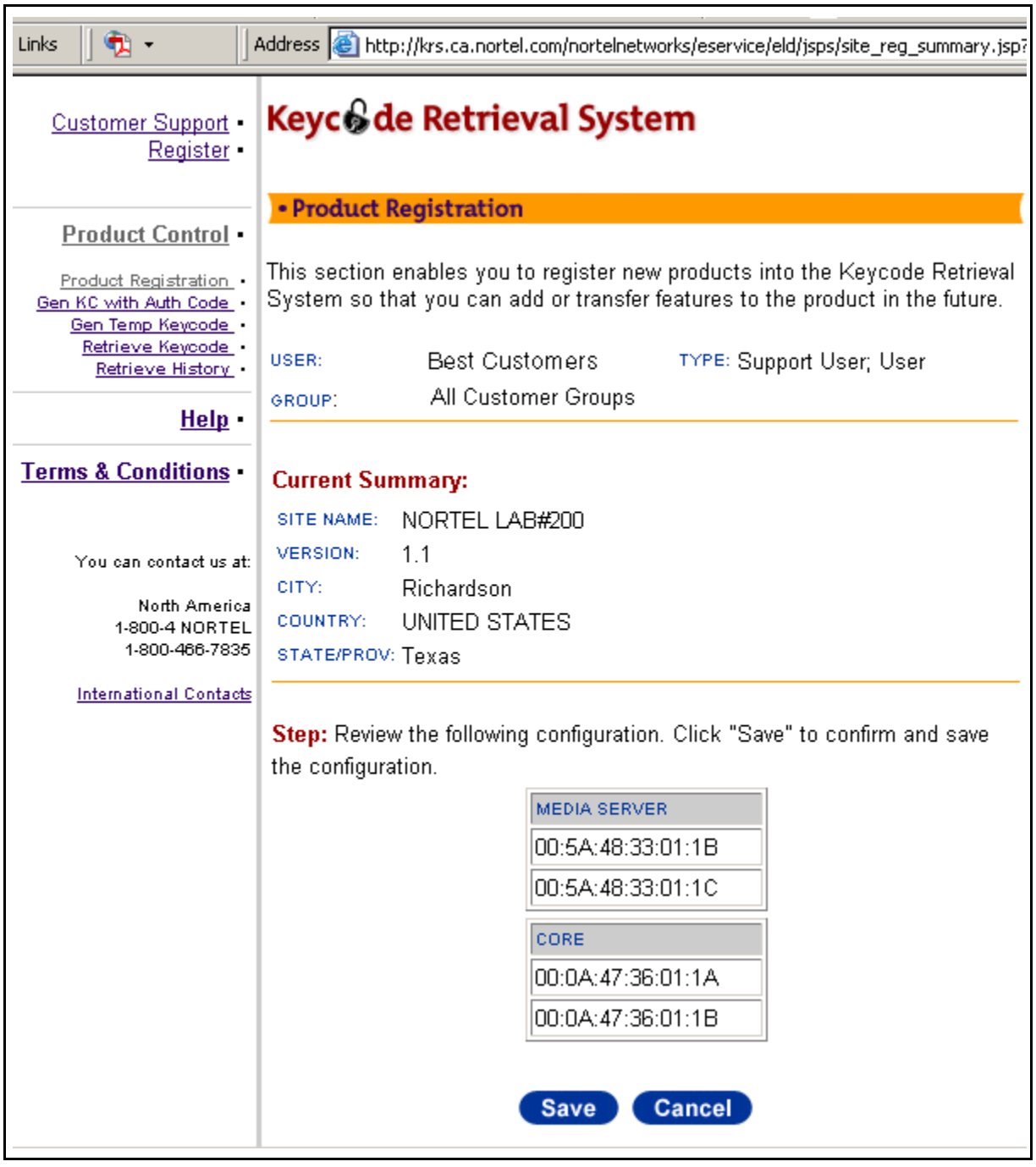
Note: If you have a second Media Application Server for your system, you must select **Create** a second time as only two MAC addresses can be associated with any one Media Application Server.

Figure 23 Keycode Retrieval System, Adding a Media Application Server



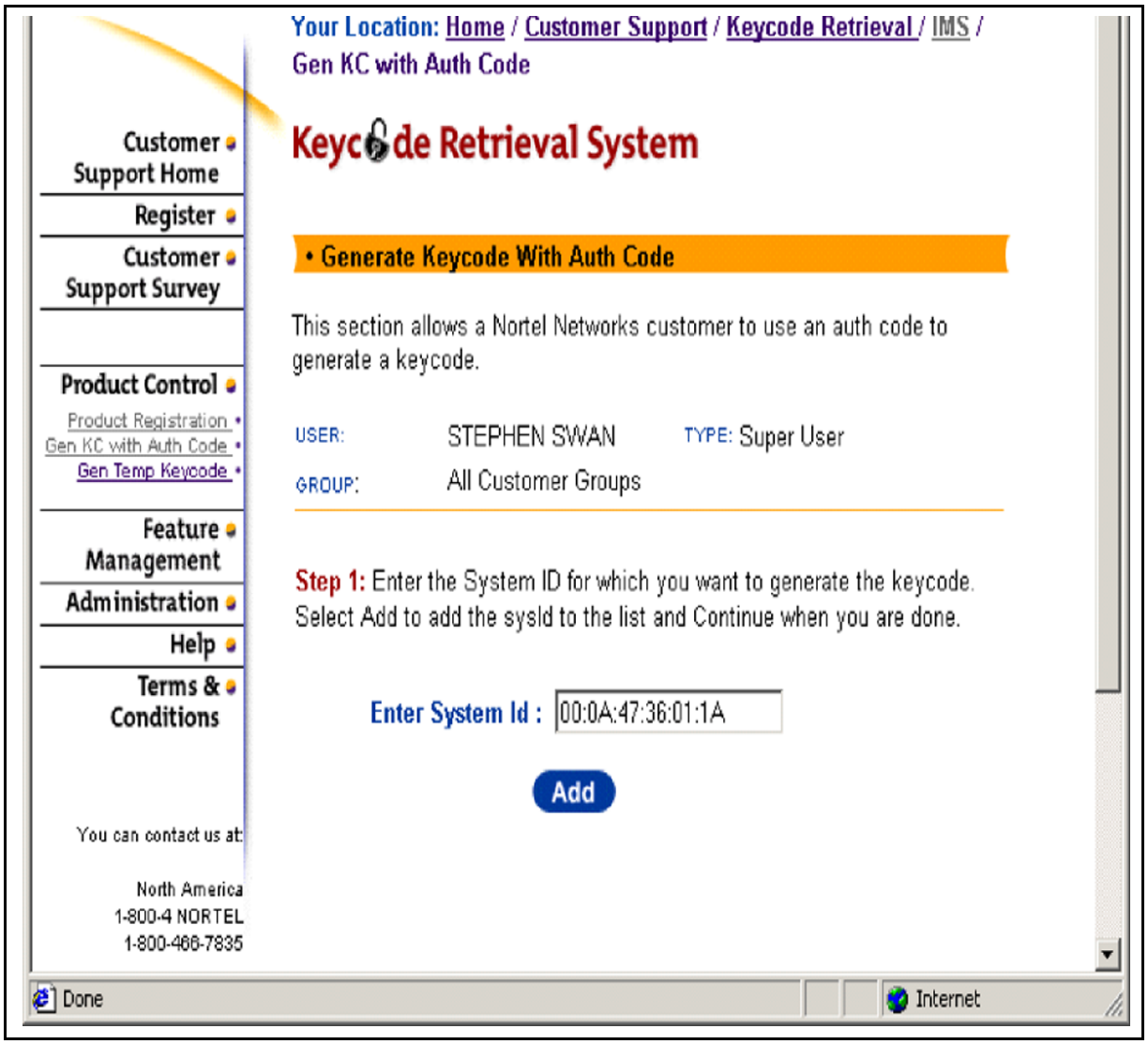
14 You will see a summary page of your entries. If the information displayed is correct, click on **Save**. You will have completed registering your system. If the information is not correct, click on **Cancel** and begin again.

Figure 24 Keycode Retrieval System, Current Summary



15 To generate keycodes for this site, click on **Gen KC with Auth Code** from the side bar, as shown in the following figure.

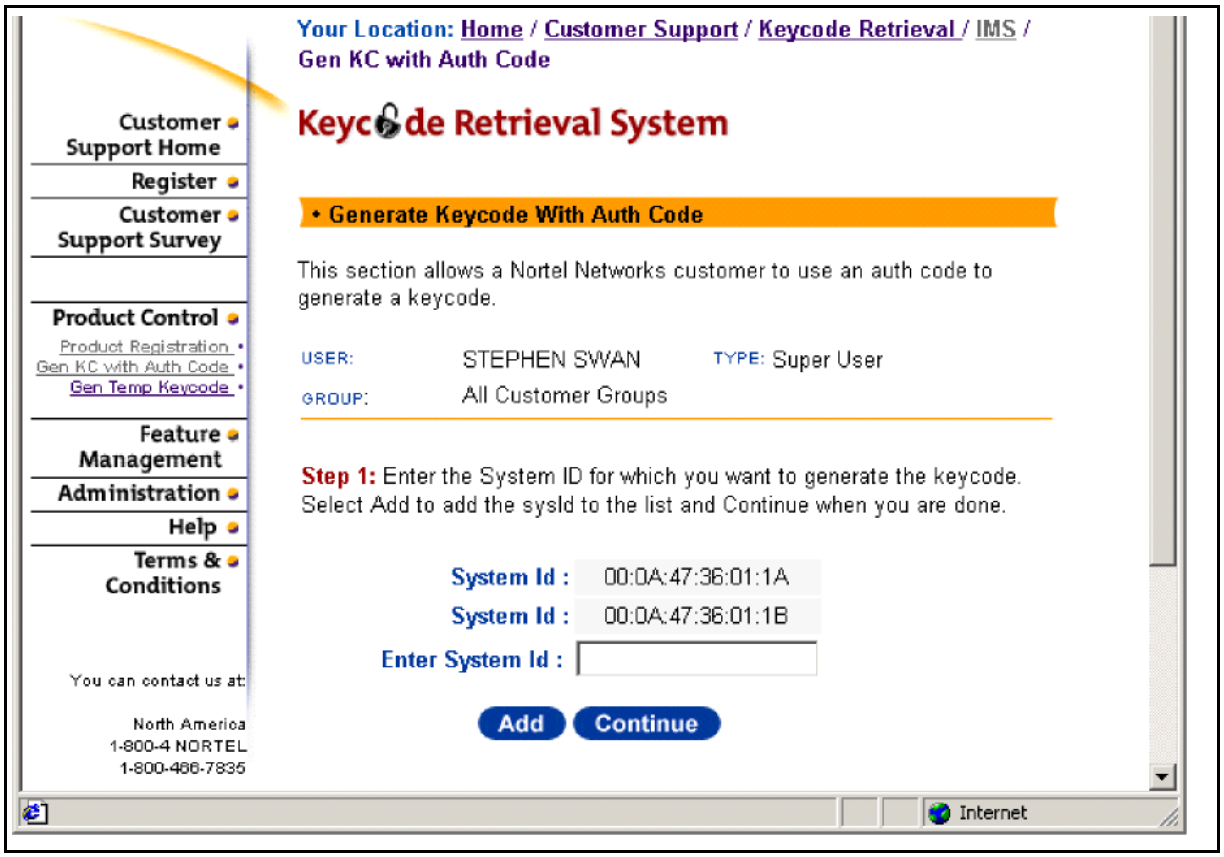
Figure 25 Keycode Retrieval System, Gen KC with Auth Code



16 To generate your keycodes, enter one of the MAC addresses of the server you want your Auth code applied to. In this case, the example shows one of the CORE MAC addresses. Select **Add**.

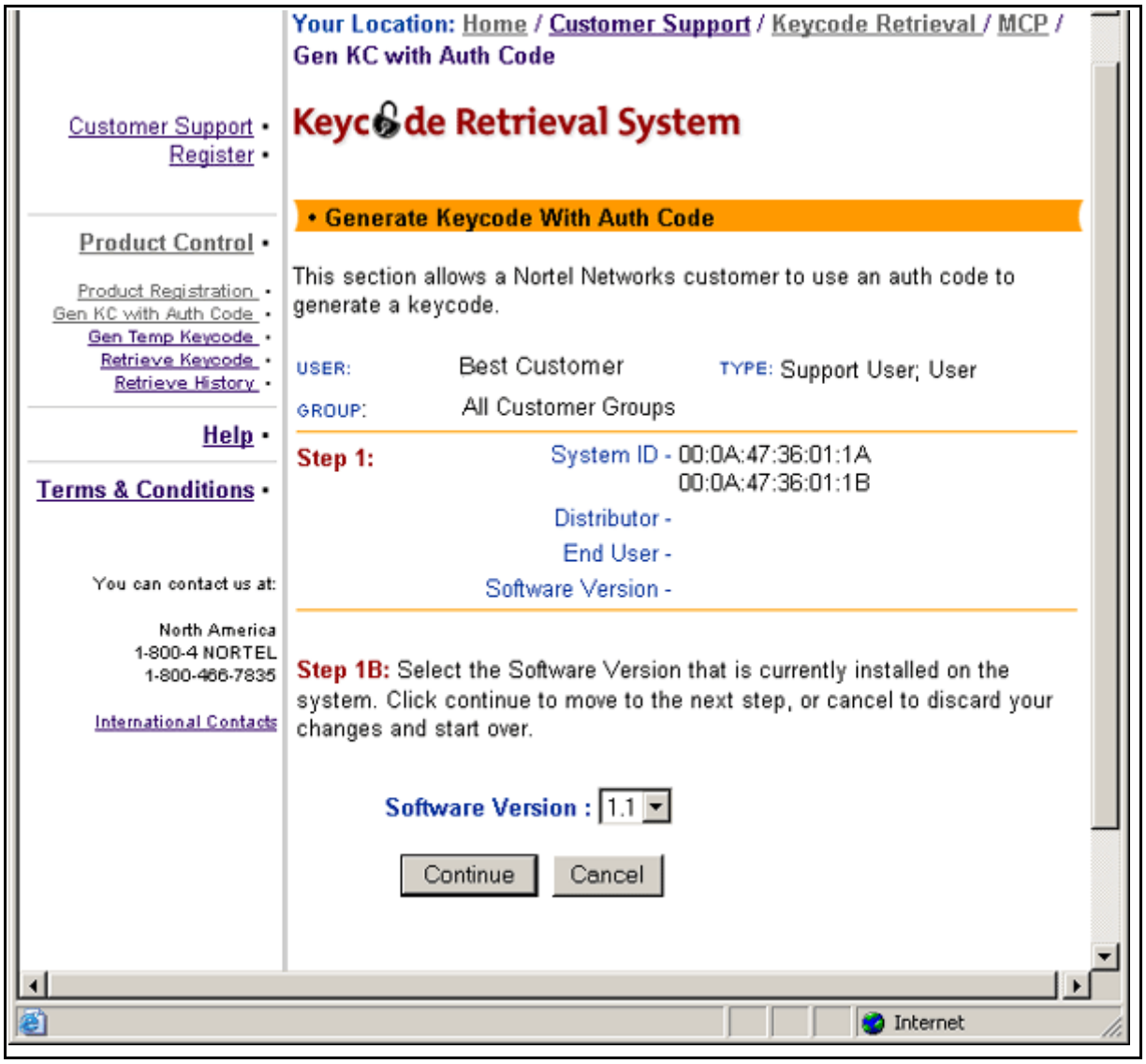
17 The KRS automatically searches for and pulls up both MAC addresses associated with the CORE. Click on **Continue**.

Figure 26 Keycode Retrieval System, Finding the keycode



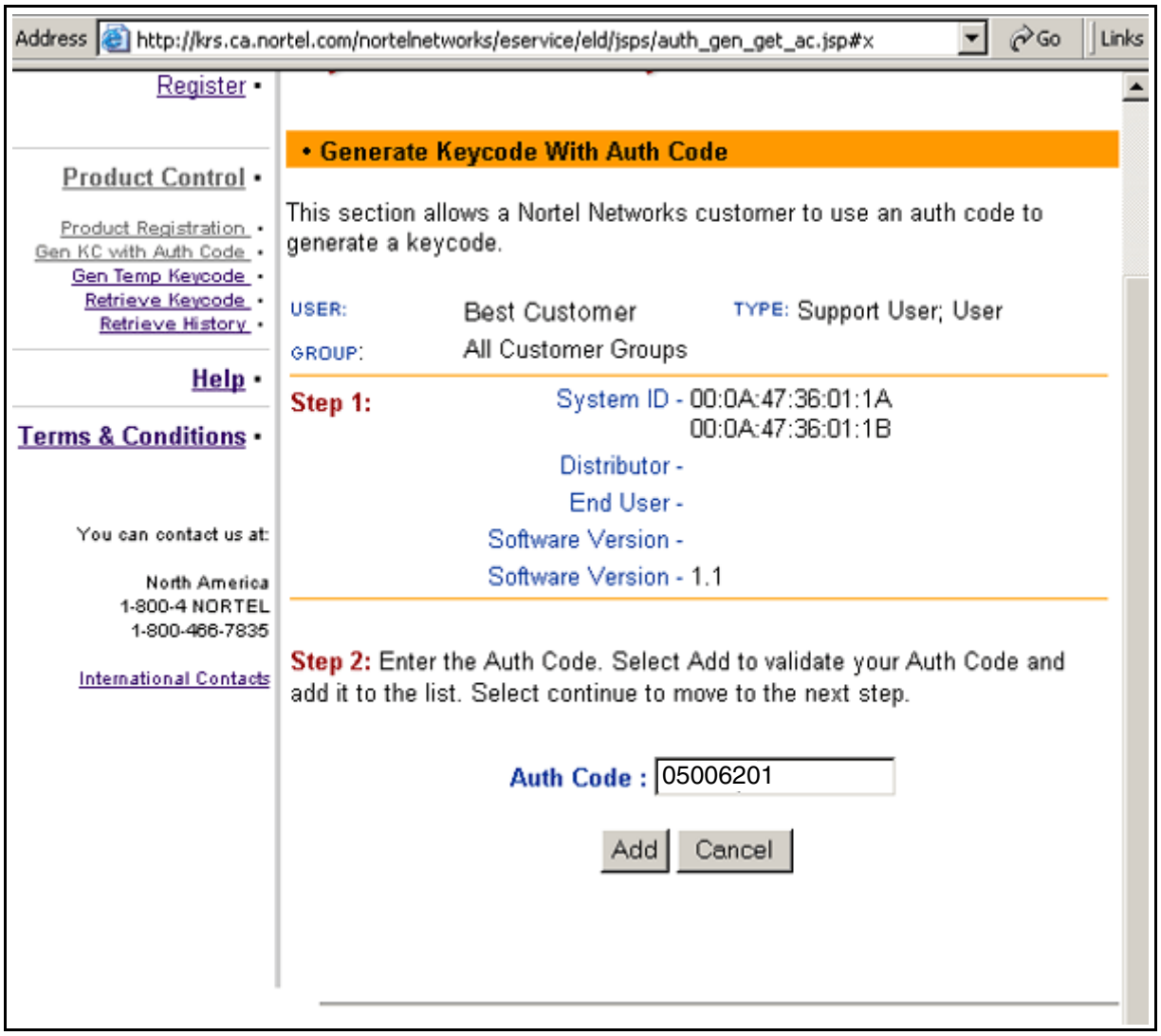
18 Select the proper Software Version for your system. Then click on **Continue**.

Figure 27 Keycode Retrieval System, Adding a MAC address



19 Enter the authcode number for the feature you wish to enable into the Auth Code box. Use the system Authorization codes to build your license key file.

Figure 28 Keycode Retrieval System, Entering the authcode

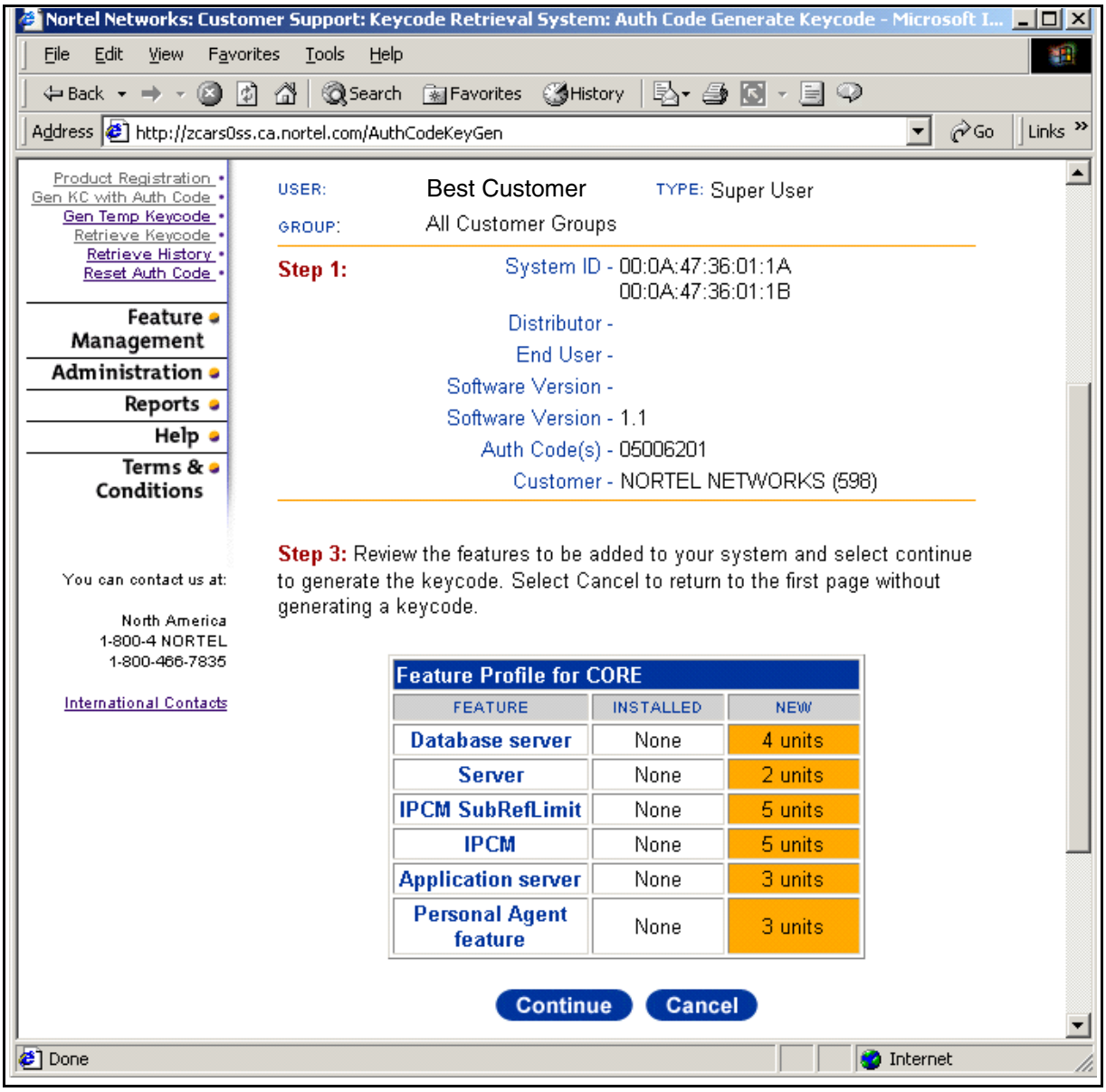


20 Select **Add** to have the KRS accept the authcode.

21 The KRS will validate the authcode and ensure the features represented are valid for your server type (CORE or MAS). If validated successfully you will be allowed to enter more authcodes until you've entered all for your server. When this process is complete, click on **Continue**.

22 The following example shows a summary of the features represented by all the sample authcodes entered. This screen shows the current features enabled and the new features to be added to your server. In a new installation there are no features displayed. If the list is correct, click on **Continue**.

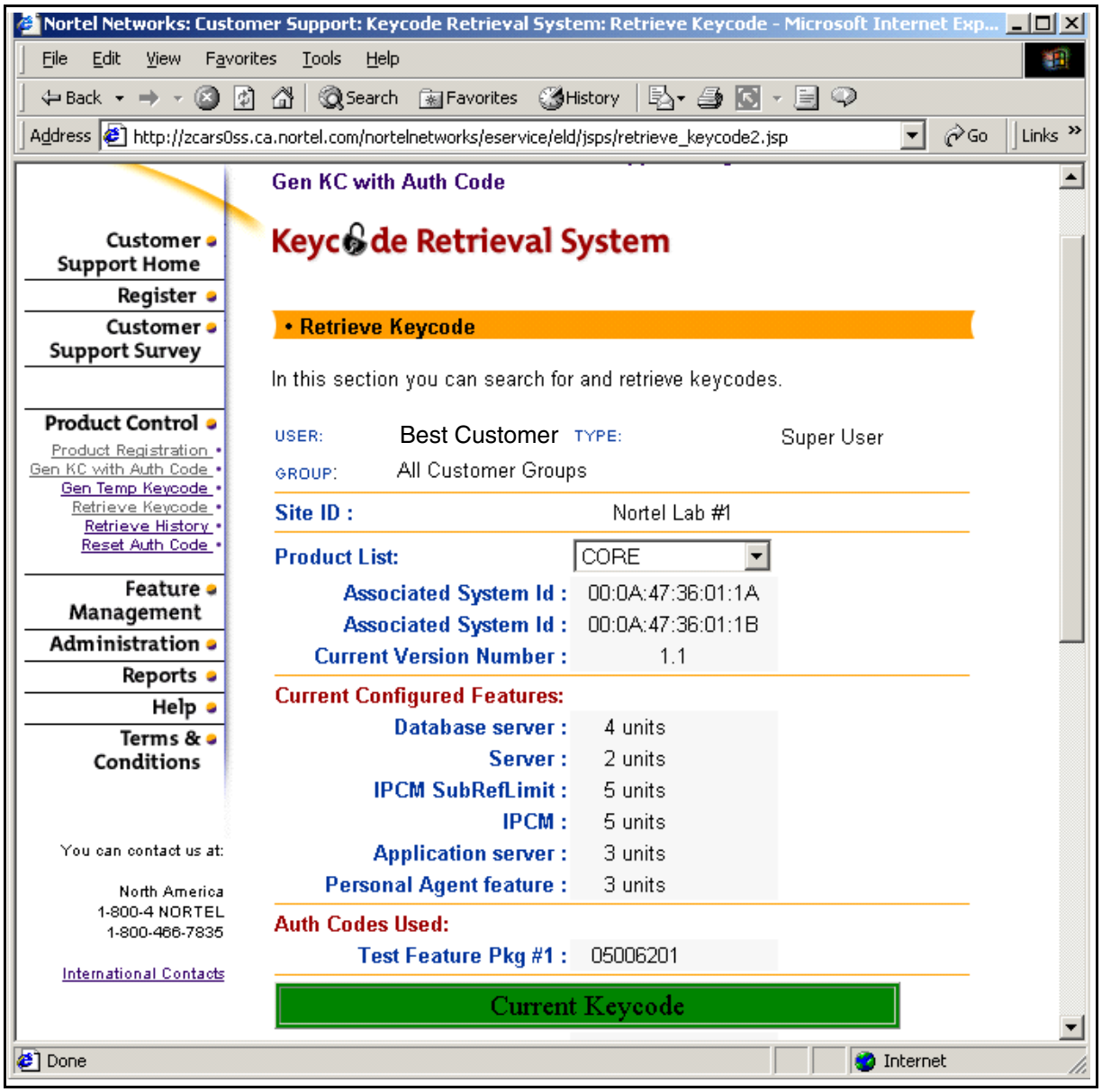
Figure 29 Keycode Retrieval System, Summary of features



23 The KRS will indicate it is generating your keycodes and saving the results in its database.

After generating the keycodes and saving results in the KRS database, the system shows the Retrieve Keycode page where you can view the features enabled for the server. From this page you will be able to download the keycode (see the figures below).

Figure 30 Keycode Retrieval System, Retrieving the keycode



The screens show the features of your keycode and the option to download the keycode to your local PC. To download the keycode click on **Download Keycode**. From there you will see the screens to download the file and save it where you choose to on your local machine. Note that the file will be provided with a product-specified naming convention.

Figure 31 Keycode Retrieval System, Retrieving your keycode, part 2

24 Download the new license key file to the MgmtSvr hard drive.

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Installing and launching the System Management Console

Prerequisites

Make sure that

- The `dbdeploy.pl` script has been successfully executed.
- The `mgmtdeploy.pl` script has been successfully executed.
- The Sysmgr is started.
- The license key is registered.

Installing the System Management Console

Procedure 25 Installing the System Management Console

At the management pc,

1. Put the MCS Base Platform System Software CD (MCS Management Console PC software) into the PC's CD-ROM.
2. Navigate to the CD-ROM drive and double click on the executable mcpmc_setup.exe.
3. To install the System Management Console, click **Next**.
4. To select default program folder, click **Next**.
5. Enter the `<SysMgr service logical IP address>`.

   Example: 120.120.13.22
6. Click **Next**.
7. Enter the System Management server port. Keep the default `11111`.
8. Click **Next**.
9. Keep default destination folder.
10. Click **Next**.
11. Review settings before copying files.

12 Click **Next** to begin installation.

13 At the pop-up window that says, `Installation successfully completed`, click **OK**.

Launching the System Management Console

Make sure that the System Management Console application has been successfully installed on the PC.

Procedure 26 Launching the System Management Console

At the management pc,

1 Click **Start ->Programs ->MCP->System Management Console**.

2 Enter the user name and password in the fields provided (case sensitive). Contact support to obtain this information.

IP addresses and port numbers will default to the machine logical IP address for the MgmtSvr and the MgmtSvr default port 11111 that you entered the procedure, Installing the System Management Console on page 95.

3 Click **OK** to log in.

The system manager will initialize the whole network view; it will take up to a minute for the system manager screen to appear.

The default base directory where the System Management Console is installed on the management pc is

```
C:\Program Files\Nortel Networks\MCP System Management Console
```

4 You should have received and stored a license key that you can navigate to. You can save the license key in the file:

```
C:\Program Files\Nortel Networks\MCP System Management Console\<file name>
```

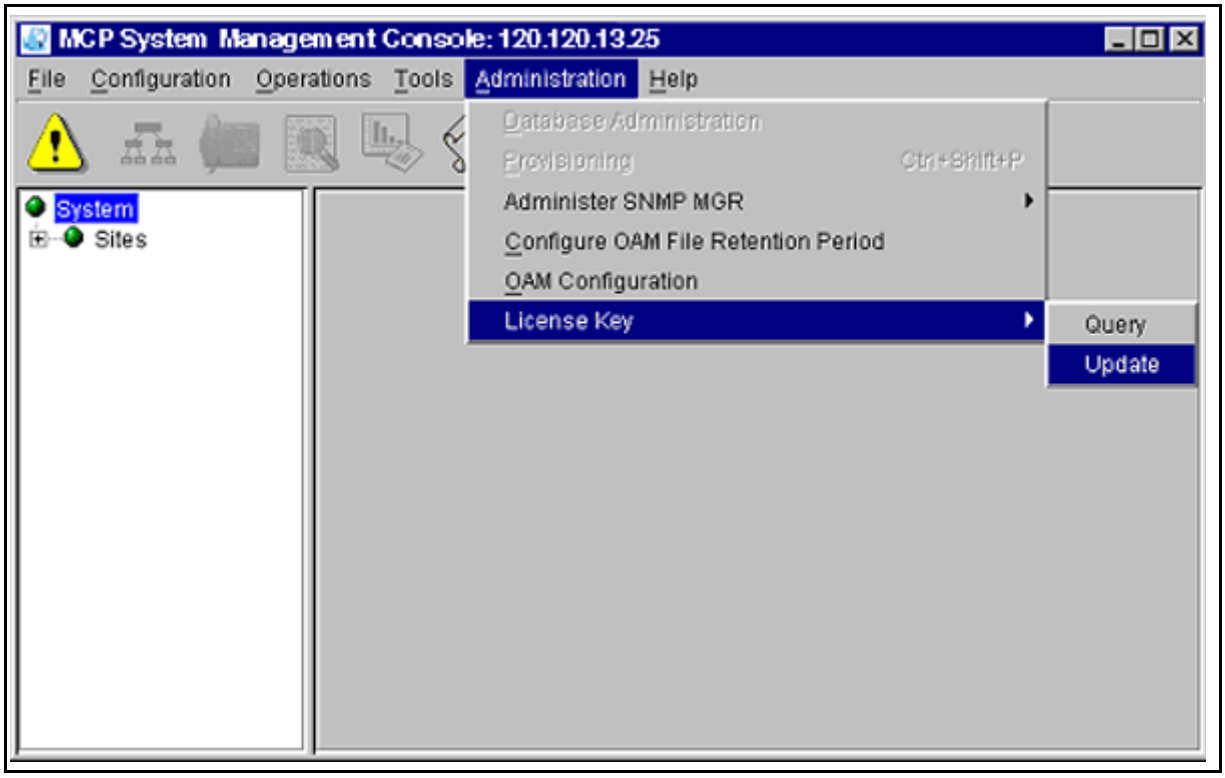
5 Install the license key.

In MCP 3.0, the initial License Key for Core Applications resides on the MgmtSvr local disk. The initial License Key allows the System Manager to start so that a registered License Key can be installed at the window. The System Manager only permits deployment of software components after you have entered a registered License Key into the system. Once the License Key has been registered in the system, that Key restricts the deployment of software components.

To update the License Key from the System Management Console, go to the Administration button and select **Update** from

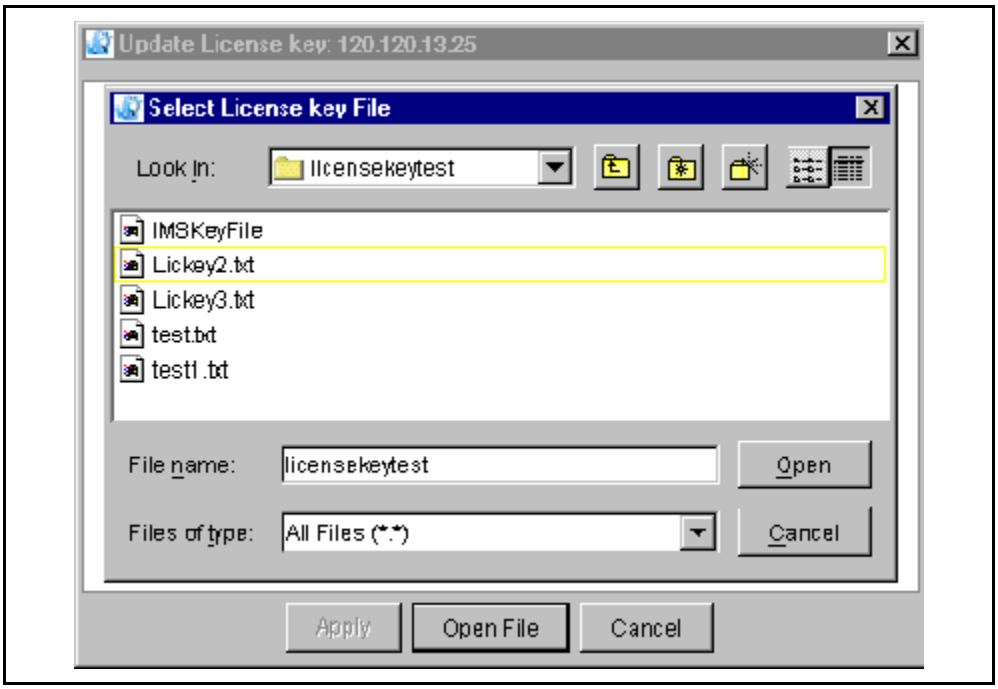
the **License Key->Update** dropdown menu (You can also select the **System=>License Key=>Update** menu option from the System tree.) as shown in Figure 32, Management Console Update License Key. The System item on the file tree must be highlighted.

Figure 32 Management Console Update License Key



6 After you have selected the Update menu-item, an Update License key/Select License key File dialog box appears, as shown in Figure 33, Select License key File Window

Figure 33 Select License key File Window



7 Once you have entered the new License Key, you will see a dialog box notifying you whether the update is successful or fails. If the system does not find a license key in the database or on the Managements server local disk, a dialog box (Figure 33) will appear, prompting for a license key file.

If you do not immediately see your license key, locate it by browsing the file system.

8 Select the license key file by highlighting the file and pressing **Apply**.

Once the file is selected, the license key appears in the text area. If a wrong file is selected, the **Open File** button can be used to select a different file.

Once you have selected the **Apply** button, a request is sent to the System Manager and the license key is saved into the database. Upon successful entry into the database, the Sysmgr sends back an appropriate response to the System Management Console and you will be notified that the license key has been saved.

9 By default, the only components available at this point are the Sysmgr; that is, the Mgmtsvr, and a database instance. Expand each element in the tree to verify that the MgmtSvr component is loaded and running.

The console screen has the basic look and feel of a Windows Explorer window with a tree structure on the left, and a general information area on the right. Each folder on the management console tree is represented as a Network Element and each has a different functionality.

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Adding a server

Prerequisites

The System Management Console has been successfully installed and started.

Adding a server

Use this procedure to add each of your servers.

Note: You should view the content of this chapter as reference information. When you perform the procedures in the next three chapters (in this document) you will be asked to return to this chapter.

Procedure 27 Adding a server

At the System Management Console,

1. Select **Sites->MgmtSite->Servers**.
2. Right click on the **Servers** folder.
3. Select **Add->General**.
4. Use the following system server fields to complete the General server window that appears.

   Note: The shaded rows indicate values that must be addressed by the installer.

System server field	Customer defines	Example
Server Name	The name that will appear from the management console.	<servername>
Location	Optional field. Describes the physical location of the server.	default
Latitude	Optional field. Describes the latitudinal coordinates of the location of this server.	default

System server field	Customer defines	Example
Longitude	Optional field. Describes the longitudinal coordinates of the location of this server.	default
Platform type	Drop-down menu with following choices: Sun or Linux. Select Sun.	Sun
IP address	The machine logical IP address of the server.	120.120.13.25
Snmp Port Request	Leave the default value as is.	default
Polling interval	240	default
Terminal Server Type	Drop-down menu with the following choices: MicroAnnexTerminalServer, ITouchTerminalServer, EthernetInterface.	MicroAnnexTerminal Server
Terminal Server IP address	The IP address of the terminal server.	120.120.13.3
Terminal Server Port	Change to the standard terminal server port number connecting to the A/LOM port of the server.	2500

5 Click **Apply**.

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Adding and configuring the Accounting Module

Prerequisites

Make sure that

- The System Management Console has been successfully installed and started.
- A valid license key has been entered and accepted by the management system.

Procedures

Procedure 28 Adding an Accounting Module component to the server

At the System Management Console,

1 Select **Sites->MgmtSite->Servers->Add->General->MgmtSvr**.

See Adding a server on page 101 for information on how to add a server before adding the AcctMgr.

2 Click on the plus sign next to the server to which you are adding the component.

3 Right click on the **Components** folder.

4 Select **Add -> Component**.

5 A list of component loads appears in the Load List window. Select the latest Small load.

6 Click **Apply**. Wait for the new component and the component configuration window to appear.

7 Enter a label (maximum six [6] characters) in the Service Component Name field at the bottom of the configuration window. The Service Component Name must be unique among all components.

Example: acct1

Procedure 29 Configuring the tabs

At the System Management Console,

1 Use the values from the table that follows to complete the Central Accounting Manager tab parameters.

Note: The shaded row indicates values that must be addressed by the installer.

Table 1 Central Accounting Manager tab (Sheet 1 of 2)

Parameter	Recommended value	Notes	Example
CAM IP Address	<Name of Server (accounting server)>		192.168.14.11 120.120.13.22
Primary CAM Port	17667		default
Recovery CAM Port	17668		default
File Rotation Size	100000	Configurable based on your system.	default
File Rotation Time	20000		default
File Compression	checked		default
Disk Monitor Major Threshold	50		default
Disk Monitor Critical Threshold	75		default
TCP/IP Enabled	unchecked	If IM Accounting is enabled, this box must be checked in order to still maintain 7 days' worth of accounting records. IM Accounting will impact performance of the SIP Application Modules and Accounting Module.	default

Table 1 Central Accounting Manager tab (Sheet 2 of 2)

Parameter	Recommended value	Notes	Example
TCP/IP Address	0.0.0.0		default
TCP/IP Primary Host Port	9000		default
TCP/IP Recovery Host Port	9001		default
FTP Push Enabled	unchecked		default
Primary FTP Directory	(blank)		default
Recovery FTP Directory	(blank)		default
Remote FTP Node ID	0.0.0.0		default
FTP User ID	(blank)	Configurable based on your system.	default
FTP USER Password	(blank)	Configurable based on your system.	default

2 Click **Apply**.

The component will deploy. Wait until you see the dialog box indicating successful installation. The component will appear in the file tree.

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Adding and configuring the SIP Application Module

Prerequisites

Make sure that

- The System Management Console has been successfully installed and started.
- A valid license key has been entered and accepted by the management system.

Procedures

Procedure 30 Adding the SIP Application Module component

At the System Management Console,

1 Select **Sites->MgmtSite->Servers->Add->General->AppSvr**.

See Adding a server on page 101 for information on how to add a server before adding the SIP Application Module.

2 Click on the plus sign next to the server to which you are adding the component.

3 Right click on the Components folder.

4 Select **Add -> Component**.

5 A list of component loads appears in the Load List window. Select the latest Small load.

6 Click **Apply**. Wait for the new component and the component configuration window to appear.

7 Enter a label (maximum six [6] characters) in the Service Component Name field at the bottom of the configuration window. The Service Component Name must be unique among all components.

Example: AppSv1

Procedure 31 Configuring the SIP Application Module tabs

ATTENTION
Do not click **Apply** until you have FINISHED configuring all the tabs.

At the System Management Console,

1 Use the values from the following table to enter into the Authentication tab parameters.

Table 2 Authentication tab (Sheet 1 of 2)

Parameter	Recommended value	Notes	Example
Authorized SIP Nodes	<IP addresses of other trusted application servers, conference servers, and gateways this application module interacts with. A trusted relationship implies that this endpoint will not be authenticated by the application module. Also, trust can be applied to nodes that cannot perform user authentication, like conference servers and gateways.>	Enter addresses individually.	Enter IPs of any gateways or conference servers being used. Also, enter the public machine logical IPs of any IPCMs being used. Note: Do not put in any WiCM servers, since they are not trusted nodes.
Private Key	MCP		default

Table 2 Authentication tab (Sheet 2 of 2)

Parameter	Recommended value	Notes	Example
Nonce Interval	600		default
Authorized Method Entries: Authorized Method	register (initial registration authorization) invite (calls authenticated) subscribe (Presence authenticated) message (Instant Message authenticated)		

2 Use the following values to complete the Local Accounting Manager tab.

The shaded rows indicate values that must be addressed by the installer.

Table 3 Local Accounting Manager tab (Sheet 1 of 2)

Parameter	Recommended value	Notes	Example
Primary CAM IP Address	<service logical IP address of accounting server>		192.168.14.11 120.120.13.22
Primary CAM Port	17667		default
Recovery CAM IP Address	<service logical IP address of accounting server>		192.168.14.11 120.120.13.22
Recovery CAM Port	17667		default
File Rotation Size	100000		default
File Rotation Time	300		default
Disk Monitor Major Threshold	50		default

Table 3 Local Accounting Manager tab (Sheet 2 of 2)

Parameter	Recommended value	Notes	Example
Disk Monitor Critical Threshold	75		default
Enable Billing For Instant Message	unchecked		default

3 Use the values from the table that follows to complete the Media Portal tab parameters.

The shaded rows indicate values that must be addressed by the installer.

Table 4 Media Portal tab

Parameter	Recommended value	Notes	Example
MGCP Port	3903		default
ignoreMediaPortalInsertionRules	checked	Check this if no RTP Media Portal is installed	default
InsertPortalWhenAnyBFW		These two are mutually exclusive.	
LocationBasedInsertionRules			

4 Use the values from the table that follows to complete the Prov Sync Service tab parameters.

Table 5 Prov Sync Service tab

Parameter	Recommended value	Notes	Example
Sync Time Period	10		default

5 Use the values from the following table to enter into the Database Base tab parameters.

The shaded rows indicate values that must be addressed by the installer.

Table 6 Database Base tab

Parameter	Recommended value	Notes	Example
Primary Host	<machine logical IP of database server>		192.168.14.111 120.120.13.22
Connections	8		default
Secondary Host	Not applicable		

6 Use the values from the table that follows to complete the SIP TCF Base tab parameters.

Table 7 SIP TCF Base tab

Parameter	Recommended value	Notes	Example
Transport Config	UDP=192.168.14.31:5060:optional:name=sipLscConduit;TCP=192.168.14.31:5060:optional:name=sipLscConduit	This is the IP address of the App svr	120.120.13.25
Invite Timer	128000		default
Maximum Number of Redirections	5		default
Initial Maximum Hop Value	20		default

7 Use the values from the following table to complete the In Memory Database tab parameters.

The shaded rows indicate values that must be addressed by the installer.

Table 8 In Memory Database tab (Sheet 1 of 2)

Parameter	Recommended value	Notes	Example
Number of domains	500		default
Update interval for domain information	600		default

Table 8 In Memory Database tab (Sheet 2 of 2)

Parameter	Recommended value	Notes	Example
Number of users	2000		default
Update interval for presence limits	86400		default
Update interval for admin banned users	900		default
Update interval for user banned users	900		default
IMAuthNonce table size	5		default
IMAuthNonce generation interval	60		default
Number of call logs	5000		default
IM CallLog DB write interval	60		default

8 Use the values from the table that follows to complete the Location Service Manager tab parameters.

Note: This tab applies to DNS servers only.

Table 9 Location Service Manager tab

Parameter	Recommended value	Notes	Example
DNS SRV Default Transport	UDP		default
DNS SRV URL	dns://0.0.0.0	If you have a DNS server, enter the IP address.	default
Use DNS SRV	unchecked		default

9 Use the values from the table that follows to complete the Registrar Service tab parameters.

Table 10 Registrar Service tab

Parameter	Recommended value	Notes	Example
Maximum Registration Duration	86400		default

10 Use the values from the table that follows to complete the Server Subscription tab parameters.

Table 11 Server Subscription tab

Parameter	Recommended value	Notes	Example
provServerURL	120.120.13.25:5095:80:http	Server name (App Server)	

11 Use the values from the table that follows to complete the Subscription Processing tab parameters.

Table 12 Subscription Processing tab

Parameter	Recommended value	Notes	Example
maximumExpires	86400		default

12 Use the values from the table that follows to complete the Long Call Service tab parameters.

Table 13 Long Call Service tab

Parameter	Recommended value	Notes	Example
Duration	60		default

13 Use the values from the following table to enter into the Server Properties tab parameters.

The shaded rows indicate values that must be addressed by the installer.

Table 14 Server Properties tab (Sheet 1 of 2)

Parameter	Recommended value	Notes	Example
Service Parameter: Label	Public_Service_Address		default
Value:	<machine logical IP address of the application server>	This value is for the Public_Service_Address	120.120.13.25 192.168.14.31

Table 14 Server Properties tab (Sheet 2 of 2)

Parameter	Recommended value	Notes	Example
Service Parameter: Label	Private_Service_Address	not applicable	default
Value:	<leave blank>		default
Service Parameter: Label	CallPark.TokenRange	Range is 1-80 characters	default
Value:		This is the value to enter if you have the ability to park a call. For more information, see the *MCS SIP Application Module Basics (NN10259-111)* document.	default

14 Use the values from the following table to enter into the Overload Controls tab parameters.

Table 15 Overload Controls tab

Parameter	Recommended value	Notes	Example
Mem Polling Interval (sec)	10		default
Minor Alarm Threshold (%)	80		default
Major Alarm Threshold (%)	85		default
Critical Alarm Threshold (%)	90		default
Call queue high threshold	70		70
Call queue low threshold	40		40
Other queue high threshold	40		default
Other queue low threshold	5		default
Database queue high threshold	40		40

Table 15 Overload Controls tab (Continued)

Parameter	Recommended value	Notes	Example
Database queue low threshold	1		default
Protocols Monitored	sip		default

15 Use the table that follows to modify the fields for the Transport Management tab.

The shaded rows indicate values that must be addressed by the installer. *Modify the public fields only. There are no private addresses*.

Table 16 Transport Management tab (Sheet 1 of 3)

Parameter	Recommended value	Notes	Example
Service Name	BBUA		default
Server ID	<specific to machine>	App1 Server ID=1 App2 Server ID=2	
Standalone Server	checked		
Server Parameter: Label	Public_Static_Address		default
Server Parameter: Value:	<machine logical IP of application server>	Enter the machine logical IP of the application server you are working on.	120.120. 13.25
HeartBeat Port	40001		default
Sending Interval	250		default
HeartBeat Timeout	3		default
Discovery Period	3		default
Active Pending Period	4		default
HB Address Enabled	checked		

Table 16 Transport Management tab (Sheet 2 of 3)

Parameter	Recommended value	Notes	Example
Remote Server Address	<machine logical IP of other application server>	Only fill PUBLIC Service Address field.	120.120. 13.25
Local Server Address	Public_Static_Address		default
Parameters: NSD Number	1		default
NSD Enabled	unchecked	Box unchecked.	
NSD Enabled: Label	Public_Service_Address		default
Value	<service logical IP address of NSD1>		
Parameters: Service Parameter: Transport Enabled	checked	Check the first two Transport Enabled boxes (for UDP and TCP) that display. Uncheck all subsequent instances of Transport Enabled.	default
Protocol	SIP		default
Transport	UDP		default
Address	Public_Service_Address		default
Port	5060		default
Params	name=sipLscConduit:interface=dmfe0	Change default qfe0 to dmfe0	dmfe0
Parameters: Service Parameter: Transport Enabled	checked	Check the first two Transport Enabled boxes (for UDP and TCP) that display. Uncheck all subsequent instances of Transport Enabled.	

Table 16 Transport Management tab (Sheet 3 of 3)

Parameter	Recommended value	Notes	Example
Protocol	SIP		default
Transport	TCP		default
Address	Public_Service_Address		default
Port	5060		default
Params	name=sipLscConduit:interface=dmfe0	Change default qfe0 to dmfe0	dmfe0

16 Click **Apply**.

The component will deploy. Wait until you see the dialog box indicating successful installation. The component will appear in the file tree.

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Adding and configuring the IP Client Manager

Prerequisites

Make sure that

- The System Management Console has been successfully installed and started.
- A valid license key has been entered and accepted by the management system.

Procedures

Procedure 32 Adding the IP Client Manager (Small SharedMicro) component

At the System Management Console,

1 Select **Sites->MgmtSite->Servers->Add->General->AppSvr**

See Adding a server on page 101 for information on how to add a server before adding the AppSvr.

2 Click on the plus sign next to the server to which you are adding the component.

3 Right click on the Components folder.

4 Select **Add -> Component**.

5 A list of component loads appears in the Load List window. Select the latest Small SharedMicro load.

6 Click **Apply**. Wait for the new component and the component configuration window to appear.

7 Enter a label (maximum six [6] characters) in the Service Component Name field at the bottom of the configuration window. The Service Component Name must be unique among all components.

Example: IPCM1

Procedure 33 Configuring the IP Client Manager tabs

ATTENTION
Do not click **Apply** until you have finished configuring the component.

At the System Management Console,

1 Use the values from the table that follows to complete the IP Client Manager tab parameters.

Note: The shaded rows indicate values that must be addressed by the installer.

Table 17 IP Client Manager tab (Sheet 1 of 2)

Parameter	Recommended Value	Notes	Example
VM Client Contact	voicemail		default
Cluster Name	<customer-specified IPCM cluster name>		ipcmCluster
IP Address	<machine logical IP of IPCM Server>		120.120.13.25 192.168.14.41
Locales	en_US		default
Max Number Devices	2000		default
Max Login Duration	2678400		default
Overflow Server	0.0.0.0		default
DB Update Interval	120		default
Auto Provisioning	checked		default
F/W Download Server	<machine logical IP of UFTP Server>	The UFTP BaseSoftware is usually installed on the same machine as the IP Client Manager, although these could be different machines.	120.120.13.25 192.168.14.41

Table 17 IP Client Manager tab (Sheet 2 of 2)

Parameter	Recommended Value	Notes	Example
Phase 1 Firmware ID	B60		default
Phase 2 Firmware ID	D61		default
Use UFTP	checked	Box is checked.	default
UFTP Server Port	50020		default
Keep Alive Timer	40		default
KA Phone Timer	90		default
Switch Server Delay	5000		default
Min ReReg Delay	60000		default
Max # Reg Attempts	25		default
Server Recovery Time Min	1		default
Server Recovery Time Max	5		default

2 Use the values from the table that follows to complete the Database Base tab parameters.

The shaded rows indicate values that must be addressed by the installer.

Table 18 Database Base tab

Parameter	Recommended value	Notes	Example
Primary Host	<machine logical IP address of the primary database server>		192.168.14.21 120.120.13.22
Connections	5		default
Secondary Host	<blank>	Leave blank	default

3 Use the values from the table that follows to complete the UNIStim Base tab parameters.

The shaded rows indicate values that must be addressed by the installer.

Table 19 UNISTIM Base tab

Parameter	Recommended value	Notes	Example
LocalHost	<machine logical IP address of the IPCM server>		192.168.14.41 120.120.13.25
Port	5000		default

4 Use the values from the table that follows to complete the SIP TCF Base tab parameters.

The shaded rows indicate values that must be addressed by the installer.

Table 20 SIP TCF Base tab

Parameter	Recommended value	Notes	Example
Transport Config	UDP=<machine logical IP of IPCM Server>:5070:optional; TCP=<machine logical IP of IPCM Server>:5070:optional	Replace each instance of 0.0.0.0 in the UDP and TCP string with the machine logical IP address of the IPCM server	UDP=192.168.14.41:5070:optional;TCP=192.168.14.41:5070:optional 120.120.13.25
Invite Timer	128000		default
Maximum Number of Redirections	5		default
Initial Maximum Hop Value	20		default

5 Use the values from the table that follows to complete the Conference Service tab parameters.

The shaded rows indicate values that must be addressed by the installer.

Table 21 Conference Service tab

Parameter	Recommended Value	Notes	Example
Conf Server URL	sip:conference		default

6 Use the values from the following table to enter into the In Memory Database tab parameters.

The shaded rows indicate values that must be addressed by the installer.

Table 22 In Memory Database tab

Parameter	Recommended value	Notes	Example
Number of domains	64		default
Update interval for domain information	600		default
Number of users	100000		default
Update interval for presence limits	1800		default
Update interval for admin banned users	900		default
Update interval for user banned users	900		default
IMAuthNonce table size	5		default
IIMAuthNonce generation interval	60		default

7 Use the values from the table that follows to complete the Prov Sync Service tab parameters.

The shaded rows indicate values that must be addressed by the installer.

Table 23 Prov Sync Service tab

Parameter	Recommended Value	Notes	Example
Sync Time Period	10		default

8 Click **Apply**.

The component will deploy. Wait until you see the dialog box indicating successful installation. The component will appear in the file tree.

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Installing the UFTP BaseSoftware

You will be installing the UFTP software on the application server.

Prerequisites

The System Management Console has been successfully installed and started.

Note: This procedure also assumes that the IP Client Manager (IPCM) component was deployed successfully; the UFTP software therefore can interact with the IPCM for firmware.

Add the UFTP to the System Management Console

Procedure 34 Adding the UFTP software

At the System Management Console,

1. Select **Sites->MgmtSite->AppSvr**.
2. Click on the plus sign next to the component to which you are adding the base software.
3. Right click on the **Components** folder.
4. Select **Add->BaseSoftware**.
5. A list of loads appears in the pop-up window. Select the latest “UFTP” load.
6. Click **Apply**.

   Note: The UFTP BaseSoftware has no configuration items. Once the installer clicks **Apply**, the deployment of the UFTP BaseSoftware occurs immediately. Once the deployment is complete, UFTP will appear in the System Management Console file tree.

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Configuring the Provisioning Module

Prerequisites

Make sure the System Management Console has been installed and started.

Procedures

Procedure 35 Adding the Provisioning Module (Small SharedMicro)

At the System Management Console,

1. Select **Sites->MgmtSite->Servers->AppSvr.**
2. Click on the plus sign next to the server to which you are adding the component.
3. Right click on the Components folder.
4. Select **Add->Component**.
5. A list of component loads appears in the Load List window. Select the latest load for the “Provisioning Module (Small SharedMicro)”.
6. Click **Apply**. Wait for the new component and the component configuration window to appear.
7. Enter a label (maximum six [6] characters) in the Service Component Name field in the dialog box that appears.

   Example: Prov

   Note: The Provisioning Module will appear under the IPCMProvWCM components folder.

ATTENTION

Do not click **Apply** until you have finished configuring the component.

Procedure 36 Configuring the Provisioning Module tabs

At the System Management Console,

1 Use the values from the table that follows to complete the SIP TCF Base tab parameters.

The shaded rows indicate values that must be addressed by the installer.

Table 24 SIP TCF Base tab

Parameter	Recommended value	Notes	Example
Transport Config	UDP=<machine logical IP of IPCM Server>:5070:optional ;TCP=<machine logical IP of IPCM Server>:5070:optional	Replace each instance of 0.0.0.0 in the UDP and TCP string with the machine logical IP address of the IPCM server	UDP=192.168.14.41 120.120.13.25:5070:optional; TCP=192.168.14.41 120.120.13.25:5070:optional 192.168.14.41 120.120.13.25
Invite Timer	128000		default
Maximum Number of Redirections	5		default
Initial Maximum Hop Value	20		default

2 Use the values from the table that follows to complete the User Agent Server tab parameters.

The shaded rows indicate values that must be addressed by the installer.

Table 25 User Agent Server tab

Parameter	Recommended value	Notes	Example
Application Server Host	<service logical logical IP address of the application server>		192.168.14.31 120.120.13.25

Table 25 User Agent Server tab (Continued)

Parameter	Recommended value	Notes	Example
Application Server Port	5060		default
Click-to-call Cancel Delay	18		default

3 Use the values from the table that follows to complete the Web Client Manager tab parameters.

The shaded rows indicate values that must be addressed by the installer.

Table 26 Web Client Manager tab (Sheet 1 of 2)

Parameter	Recommended value	Notes	Example
WCM Socket Server Active	checked		checked
WCM Socket Server Host	<machine logical IP address of the Web Client Manager>		120.120.12.43
WCM Socket Server Port	3090		default
Audio RTP Port Low	50000		default
Audio RTP Port High	50100		default
Use SSL	checked		default
Keep Alive Ping	checked		default
Ping Time Out Timer	60		default
Ping Interval Timer	120		default
Connection Time Out Timer	360		default

Table 26 Web Client Manager tab (Sheet 2 of 2)

Parameter	Recommended value	Notes	Example
Allow Auto Login	checked		default
Download JRE Version	This field holds the version of the Java Runtime Environment (JRE) installer that the Web Client applet downloads. For the latest version of the installer from Sun, leave this field empty. For the installer provided by the MCS (The MCS currently provides 5 different JRE installers.) , use string "1.4.2_01", "1.4.2_02", "1.4.2_03", "1.4.2_04", or "1.4.2_05" for the corresponding installer for JRE version 1.4.2_01, 1.4.2_02, 1.4.2_03, 1.4.2_04, or 1.4.2_05. You may also provide a different JRE installer (filename has to be j2re-windows-i586-p.exe) in the JRE installer directory, which is the /IMS/web/data/web/webapps/pca/data/jar directory on the server where the Provisioning Module runs. In this case, use any other version string, such as "1.4.2_06". This field should not contain white space.		

4 Use the values from the table that follows to complete the Database Base tab parameters.

The shaded rows indicate values that must be addressed by the installer.

Table 27 Database Base tab

Parameter	Recommended value	Notes	Example
Primary Host	<machine logical IP database server>		192.168.14.21 120.120.13.22
Connections	8		default
Secondary Host	<leave blank>		default

5 Use the values from the table that follows to complete the SIP Personal Agent tab parameters.

Table 28 SIP Personal Agent tab

Parameter	Recommended value	Notes	Example
Maximum User Picture Size	24		default

6 Use the values from the table that follows to complete the Provisioning Client tab parameters.

The shaded rows indicate values that must be addressed by the installer.

Table 29 Provisioning Client tab

Parameter	Recommended value	Notes	Example
Provisioning Server Host	<machine logical IP Address of the Provisioning Module>		192.168.14.41 120.120.13.25
Provisioning Server Port	8821		default
Provisioning Blocked Wait Time	10000		default

7 Use the values from the table that follows to complete the Conference_Service tab parameters.

Table 30 Conference_Service tab

Parameter	Recommended value	Notes	Example
Conf Server URL	sip:conference		default

8 Click **Apply**.

Note: A progress window will display indicating the status of the deployment.

The component will deploy. Wait until you see the dialog box indicating successful installation. The component will appear in the file tree.

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Adding and configuring the Web Client Manager

Prerequisites

Make sure that

- The System Management Console has been successfully installed and started.
- A valid license key has been entered and accepted by the management system.

Procedures

Procedure 37 Adding the Web Client Manager (Small SharedMicro)

At the System Management Console,

1. Select **Sites->MgmtSite->Servers->AppSvr**.
2. Click on the plus sign next to the server to which you are adding the component.
3. Right click on the Components folder.
4. Select **Add -> Component**.
5. A list of component loads appears in the Load List window. Select the latest Small SharedMicro load.
6. Click **Apply**. Wait for the new component and the component configuration window to appear.
7. Enter a label (maximum six [6] characters) in the Service Component Name field at the bottom of the configuration window. The Service Component Name must be unique among all components.

   Example: WCM1

Procedure 38 Configuring the Web Client Manager tabs

ATTENTION
Do not click **Apply** until you have finished configuring the component.

At the System Management Console,

1 Use the values from the table that follows to complete the User Agent Server tab parameters.

The shaded rows indicate values that must be addressed by the installer.

Table 31 User Agent Server tab

Parameter	Recommended Value	Notes	Example
Application Server Host	<service logical IP address of the application server>		192.168.14.31 120.120.13.25
Application Server Port	5060		default
Click-to-Call Cancel Delay	18		default

2 Use the values from the table that follows to complete the SIP TCF Base tab parameters.

The shaded rows indicate values that must be addressed by the installer.

Table 32 SIP TCF Base tab

Parameter	Recommended Value	Notes	Example
Transport Config	UDP=<machine logical IP of the WCM Server.>:5080:optional;TCP=<machine logical IP of the WCM Server.>:5080:optional;UDP=<machine logical IP of the WCM Server.>:5085:optional:name=sipLscConduit;TCP=<machine logical IP of the WCM Server.>:5085:optional:name=sipLscConduit	Replace each instance of 0.0.0.0 in the UDP and TCF strings with the machine logical IP address of the Web Client Manager Server	UDP=192.168.14.41 120.120.13.25:5080:optional;TCP=192.168.14.31 120.120.13.25:5080:optional;UDP=192.168.14.41 120.120.13.25:5085:optional:name=sipLscConduit;TCP=192.168.14.41 120.120.13.25:5085:optional:name=sipLscConduit
Invite Timer	128000		default
Maximum Number of Redirections	5		default
Initial Maximum Hop Value	20		default

3 Use the values from the table that follows to complete the Web Client Manager tab parameters.

The shaded rows indicate values that must be addressed by the installer.

Table 33 Web Client Manager tab (Sheet 1 of 2)

Parameter	Recommended value	Notes	Example
WCM Socket Server Active	checked		checked
WCM Socket Server Host	<machine logical IP address of the Web Client Manager>		120.120.12.43
WCM Socket Server Port	3090		default

Table 33 Web Client Manager tab (Sheet 2 of 2)

Parameter	Recommended value	Notes	Example
Audio RTP Port Low	50000		default
Audio RTP Port High	50100		default
Use SSL	checked		default
Keep Alive Ping	checked		default
Ping Time Out Timer	60		default
Ping Interval Timer	120		default
Connection Time Out Timer	360		default
Allow Auto Login	checked		default
Download JRE Version	This field holds the version of the Java Runtime Environment (JRE) installer that the Web Client applet downloads. For the latest version of the installer from Sun, leave this field empty. For the installer provided by the MCS (The MCS currently provides 5 different JRE installers.) , use string "1.4.2_01", "1.4.2_02", "1.4.2_03", "1.4.2_04", or "1.4.2_05" for the corresponding installer for JRE version 1.4.2_01, 1.4.2_02, 1.4.2_03, 1.4.2_04, or 1.4.2_05. You may also provide a different JRE installer (filename has to be j2re-windows-i586-p.exe) in the JRE installer directory, which is the /IMS/web/data/web/webapps/pca/data/jar directory on the server where the Provisioning Module runs. In this case, use any other version string, such as "1.4.2_06". This field should not contain white space.		

4 Use the values from the table that follows to complete the Conference_Service tab parameters.

The shaded rows indicate values that must be addressed by the installer.

Table 34 Conference_Service tab

Parameter	Recommended Value	Notes	Example
Conf Server URL	sip:conference		default

5 Use the values from the table that follows to complete the Database Base tab parameters.

The shaded rows indicate values that must be addressed by the installer.

Table 35 Database Base tab

Parameter	Recommended Value	Notes	Example
Primary Host	<machine logical IP database server>		192.168.14.21 120.120.13.22
Connections	5		default
Secondary Host	<leave blank>		default

6 Click **Apply**.

7 The component will deploy. Wait until you see the dialog box indicating successful installation. The component will appear in the file tree.

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Installing and configuring the Oracle Monitor

Prerequisites

Make sure the following are completed successfully:

- The System Management Console has been installed and started.
- A server definition has been created for the Oracle Monitor.

Procedures

Procedure 39 Adding the Oracle Monitor (Micro) to the System Management Console

At the System Management Console,

1. Select **Sites->MgmtSite->Servers->MgmtSvr**.
2. Click on the plus sign next to the server to which you are adding the component.
3. Right click on the Components folder.
4. Select **Add -> Component**.
5. A list of component loads appears in the Load List window. Select the latest Small load.
6. Click **Apply**. Wait for the new component and the component configuration window to appear.
7. Enter a label (maximum six [6] characters) in the Service Component Name field at the bottom of the configuration window. The Service Component Name must be unique among all components.

   Example: Oramn1

Procedure 40 Configuring the Oracle Monitor tabs

ATTENTION
Do not click **Apply** until you have finished configuring the component.

At the System Management Console,

1 Use the values from the table that follows to complete the Oracle Server tab parameters.

The shaded rows indicate values that must be addressed by the installer.

Table 36 Oracle Server tab

Parameter	Recommended value	Notes	Example
SNMP request port	9161		default
SNMP agent IP address	<either the word "localhost" or the machine logical IP address of the database server that this Oracle Monitor is running on>		192.168.14.31 120.120.13.22
Oracle Server name	imsdb1		default
Active	checked		default
Monitor functions: Handler name	GeneralInfo		default
Monitor functions: Polling interval (min)	1		default
Active	checked		default
Monitor functions: Handler name	OperationalStatus		default
Monitor functions: Polling interval (min)	1		default
Active	checked		default

2 Use the values from the table that follows to complete the IMS Main Database tab parameters.

The shaded rows indicate values that must be addressed by the installer.

Table 37 IMS Main Database tab (Sheet 1 of 4)

Parameter	Recommended value	Notes	Example
SNMP request port	9161		default
SNMP agent IP address	<either the word "localhost" or the machine logical IP address of the database server that this Oracle Monitor is running on>		192.168.14.21 120.120.13.22
Oracle Server name	imsdb1		default
Oracle Database name	imsdb1		default
Active	checked		default
Component name	TableSpace		default
Polling interval (min)	1		default
Active	checked		default
Gauged Component Monitoring: Threshold monitors: Gauge name	percentageUtilization		default
Gauged Component Monitoring: Threshold monitors: Upper limit	100		default
Gauged Component Monitoring: Threshold monitors: Lower limit	0		default
Gauged Component Monitoring: Threshold monitors: Negative going threshold value	10		default
Gauged Component Monitoring: Threshold monitors: Negative going threshold hysteresis	5		default

Table 37 IMS Main Database tab (Sheet 2 of 4)

Parameter	Recommended value	Notes	Example
Gauged Component Monitoring: Threshold monitors: Positive going threshold value 1	70		default
Gauged Component Monitoring: Threshold monitors: Positive going threshold hysteresis 1	5		default
Gauged Component Monitoring: Threshold monitors: Positive going threshold value 2	85		default
Gauged Component Monitoring: Threshold monitors: Positive going threshold hysteresis 2	5		default
Gauged Component Monitoring: Threshold monitors: Capacity or max value	99		default
Gauged Component Monitoring: Threshold monitors: Capacity or max hysteresis	0		default
Gauged Component Monitoring: Threshold monitors: Alarm Severity on Negative Going Threshold	NONE		default
Gauged Component Monitoring: Threshold monitors: Alarm Severity on Positive Going Threshold1	WARNING		default

Table 37 IMS Main Database tab (Sheet 3 of 4)

Parameter	Recommended value	Notes	Example
Gauged Component Monitoring: Threshold monitors: Alarm Severity on Positive Going Threshold2	MINOR		default
Gauged Component Monitoring: Threshold monitors: Alarm Severity on Maximum Rate	MAJOR		default
Gauged Component Monitoring: Threshold monitors: Alarm Severity on Upper Limit overrun	MAJOR		default
Gauged Component Monitoring: Threshold monitors: Alarm Severity on Lower Limit underrun	MAJOR		default
Gauged Component Monitoring: Threshold monitors: Usage state affected	unchecked		default
Monitor functions: Component name	BlockGetRate		default
Monitor functions: Polling interval (min)	1		default
Monitor functions: Active	checked		default
Monitor functions: Component name	OperationalStatus		default
Monitor functions: Polling interval (min)	1		default
Monitor functions: Active	checked		default
Monitor functions: Component name	DataFile		default

Table 37 IMS Main Database tab (Sheet 4 of 4)

Parameter	Recommended value	Notes	Example
Monitor functions: Polling interval (min)	1		default
Monitor functions: Active	checked		default
Monitor functions: Component name	CacheHitRatio		default
Monitor functions: Polling interval (min)	1		default
Monitor functions: Active	checked		default
Trap handlers: Trap handler name	oracleDBTrapHandler		default
Active	checked		default

3 Use the values from the table that follows to complete the Database Base tab parameters.

The shaded rows indicate values that must be addressed by the installer.

Table 38 Database Base tab

Parameter	Recommended value	Notes	Example
Primary Host	<machine logical IP address of the database server>		192.168.14.21 120.120.13.22
Connections	1		default
Secondary Host	<leave blank>		default

Use the values from the table that follows to complete the Oracle Listeners tab parameters.

The shaded rows indicate values that must be addressed by the installer.

Table 39 Oracle Listeners tab

Parameter	Recommended value	Notes	Example
SNMP request port	9161		default
SNMP agent IP address	<either the word "localhost" or the machine logical IP address of the database server that this Oracle Monitor is running on>		192.168.14.21 120.120.13.22
Active	checked		default
Component Monitoring: Component name	OracleListeners		default
Component Monitoring: Polling interval (min)	1		default
Active	checked		default

4 Click **Apply**.

The component will deploy. Wait until you see the dialog box indicating successful installation. The component will appear in the file tree.

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Installing the iPlanet Monitor

Prerequisites

Make sure the System Management Console has been successfully installed and started.

Procedures

Procedure 41 Adding the iPlanet Monitor

At the System Management Console,

1. Select **Sites->MgmtSite->Servers->AppSvr**
2. Click on the plus sign next to the server to which you are adding the component.
3. Right click on the Components folder.
4. Select **Add -> Component**.
5. A list of component loads appears in the Load List window. Select the latest Small load.
6. Click **Apply**. Wait for the new component and the component configuration window to appear.
7. Enter a label (maximum six [6] characters) in the Service Component Name field at the bottom of the configuration window. The Service Component Name must be unique among all components.

   Example: iPlMon

Procedure 42 Configuring the iPlanet Monitor

At the System Management Console,

1

> **ATTENTION**
> Do not click **Apply** until you have finished configuring the tab.

Use the values from the table that follows to complete the Web Monitor tab parameters.

Note: The shaded rows indicate values that must be addressed by the installer.

Table 40 Web Monitor tab (Sheet 1 of 12)

Parameter	Recommended value	Notes	Example
SNMP request port	8161		default
SNMP agent IP address	<machine logical IP of Provisioning Module>		192.168.14.41 120.120.13.25
Active	checked		default
Component Monitoring: Class name	com.nortelnetworks.ims.mw.probe.iplanet.IplanetProcessHandler		default
Component Monitoring: Component name	Process Stats		default
Component Monitoring: Polling interval in minutes	1		default
Component Monitoring: Active for polling	checked		default
Component Monitoring: Threshold monitors: Gauge name	percentConnectionQueueUsage		default
Component Monitoring: Threshold monitors: Upper limit	100		default

Table 40 Web Monitor tab (Sheet 2 of 12)

Parameter	Recommended value	Notes	Example
Component Monitoring: Threshold monitors: Lower Limit	0		default
Component Monitoring: Threshold monitors: Negative going threshold value	10		default
Component Monitoring: Threshold monitors: Negative going threshold hysteresis	5		default
Component Monitoring: Threshold monitors: Positive going threshold value 1	70		default
Component Monitoring: Threshold monitors: Positive going threshold hysteresis 1	5		default
Component Monitoring: Threshold monitors: Positive going threshold value 2	85		default
Component Monitoring: Threshold monitors: Positive going threshold hysteresis 2	5		default
Component Monitoring: Threshold monitors: Capacity or max value	99		default
Component Monitoring: Threshold monitors: Capacity or max hysteresis	0		default

Table 40 Web Monitor tab (Sheet 3 of 12)

Parameter	Recommended value	Notes	Example
Component Monitoring: Threshold monitors: Alarm Severity on Negative going threshold	NONE		default
Component Monitoring: Threshold monitors: Alarm Severity on Positive going threshold 1	WARNING		default
Component Monitoring: Threshold monitors: Alarm Severity on Positive going threshold 2	MINOR		default
Component Monitoring: Threshold monitors: Alarm Severity on Maximum Rate	MAJOR		default
Component Monitoring: Threshold monitors: Alarm Severity on Upper Limit OverRun	MAJOR		default
Component Monitoring: Threshold monitors: Alarm Severity on Lower Limit UnderRun	MAJOR		default
Component Monitoring: Threshold monitors: Usage state affected	unchecked		default
Component Monitoring: Threshold monitors: Gauge name	percentKeepAliveQueueUsage		default
Component Monitoring: Threshold monitors: Upper limit	100		default
Component Monitoring: Threshold monitors: Lower limit	0		default

Table 40 Web Monitor tab (Sheet 4 of 12)

Parameter	Recommended value	Notes	Example
Component Monitoring: Threshold monitors: Negative going threshold value	10		default
Component Monitoring: Threshold monitors: Negative going threshold hysteresis	5		default
Component Monitoring: Threshold monitors: Positive going threshold value 1	70		default
Component Monitoring: Threshold monitors: Positive going threshold hysteresis 1	5		default
Component Monitoring: Threshold monitors: Positive going threshold value 2	85		default
Component Monitoring: Threshold monitors: Positive going threshold hysteresis 2	5		default
Component Monitoring: Threshold monitors: Capacity or max value	99		default
Component Monitoring: Threshold monitors: Capacity or max hysteresis	0		default
Component Monitoring: Threshold monitors: Alarm Severity on Negative going threshold	NONE		default

Table 40 Web Monitor tab (Sheet 5 of 12)

Parameter	Recommended value	Notes	Example
Threshold monitors: Alarm Severity on Positive going threshold 1	WARNING		default
Threshold monitors: Alarm Severity on Positive going threshold 2	MINOR		default
Component Monitoring: Threshold monitors: Alarm Severity on Maximum Rate	MAJOR		default
Component Monitoring: Threshold monitors: Alarm Severity on Upper Limit OverRun	MAJOR		default
Component Monitoring: Threshold monitors: Alarm Severity on Lower Limit OverRun	MAJOR		default
Component Monitoring: Threshold monitors: Usage state affected	unchecked		default
Component Monitoring: Gauge name	percentSysMemUsage		default
Component Monitoring: Upper limit	100		default
Component Monitoring: Lower Limit	0		default
Component Monitoring: Negative going threshold value	10		default
Component Monitoring: Negative going threshold hysteresis	5		default

Table 40 Web Monitor tab (Sheet 6 of 12)

Parameter	Recommended value	Notes	Example
Component Monitoring: Positive going threshold value 1	70		default
Component Monitoring: Positive going threshold hysteresis 1	5		default
Component Monitoring: Positive going threshold value 2	85		default
Component Monitoring: Positive going threshold hysteresis 2	5		default
Component Monitoring: Capacity or max value	99		default
Component Monitoring: Capacity or max hysteresis	0		default
Alarm Severity on Negative going threshold	NONE		default
Alarm Severity on Positive going threshold 1	WARNING		default
Alarm Severity on Positive going threshold 2	MINOR		default
Alarm Severity on Maximum Rate	MAJOR		default
Alarm Severity on Upper Limit OverRun	MAJOR		default
Alarm Severity on Lower Limit UnderRun	MAJOR		default
Usage state affected	unchecked		default
Component Monitoring: Class name	com.nortelnetworks.ims.mw.probe.iplanet.IplanetCpuUtilHandler		default

Table 40 Web Monitor tab (Sheet 7 of 12)

Parameter	Recommended value	Notes	Example
Component Monitoring: Component name	Cpu Util		default
Component Monitoring: Polling interval in minutes	1		default
Component Monitoring: Active for polling	checked		default
Component Monitoring: Threshold monitors: Gauge name	cpuUserTime		default
Component Monitoring: Threshold monitors: Upper limit	100		default
Component Monitoring: Threshold monitors: Lower Limit	0		default
Component Monitoring: Threshold monitors: Negative going threshold value	10		default
Component Monitoring: Threshold monitors: Negative going threshold hysteresis	5		default
Component Monitoring: Threshold monitors: Positive going threshold value 1	70		default
Component Monitoring: Threshold monitors: Positive going threshold hysteresis 1	5		default
Component Monitoring: Threshold monitors: Positive going threshold value 2	85		default

Table 40 Web Monitor tab (Sheet 8 of 12)

Parameter	Recommended value	Notes	Example
Component Monitoring: Threshold monitors: Positive going threshold hysteresis 2	5		default
Component Monitoring: Threshold monitors: Capacity or max value	99		default
Component Monitoring: Threshold monitors: Capacity or max hysteresis	0		default
Component Monitoring: Threshold monitors: Alarm Severity on Negative going threshold	NONE		default
Component Monitoring: Threshold monitors: Alarm Severity on Positive going threshold 1	WARNING		default
Component Monitoring: Threshold monitors: Alarm Severity on Positive going threshold 2	MINOR		default
Component Monitoring: Threshold monitors: Alarm Severity on Maximum Rate	MAJOR		default
Component Monitoring: Threshold monitors: Alarm Severity on Upper Limit OverRun	MAJOR		default
Component Monitoring: Threshold monitors: Alarm Severity on Lower Limit UnderRun	MAJOR		default

Table 40 Web Monitor tab (Sheet 9 of 12)

Parameter	Recommended value	Notes	Example
Component Monitoring: Threshold monitors: Usage state affected	unchecked		default
Component Monitoring: Class name	com.nortelnetworks.ims.mw.probe.iplanet.IplanetThreadPoolHandler		default
Component Monitoring: Component name	Thread Pool Stats		default
Component Monitoring: Polling interval in minutes	1		default
Component Monitoring: Active for polling	checked		default
Component Monitoring: Threshold monitors: Gauge name	percentThreadPoolUsage		default
Component Monitoring: Threshold monitors: Upper limit	100		default
Component Monitoring: Threshold monitors: Lower Limit	0		default
Component Monitoring: Threshold monitors: Negative going threshold value	10		default
Component Monitoring: Threshold monitors: Negative going threshold hysteresis	5		default
Component Monitoring: Threshold monitors: Positive going threshold value 1	70		default

Table 40 Web Monitor tab (Sheet 10 of 12)

Parameter	Recommended value	Notes	Example
Component Monitoring: Threshold monitors: Positive going threshold hysteresis 1	5		default
Component Monitoring: Threshold monitors: Positive going threshold value 2	85		default
Component Monitoring: Threshold monitors: Positive going threshold hysteresis 2	5		default
Component Monitoring: Threshold monitors: Capacity or max value	99		default
Component Monitoring: Threshold monitors: Capacity or max hysteresis	0		default
Component Monitoring: Threshold monitors: Alarm Severity on Negative going threshold	NONE		default
Component Monitoring: Threshold monitors: Alarm Severity on Positive going threshold 1	WARNING		default
Component Monitoring: Threshold monitors: Alarm Severity on Positive going threshold 2	MINOR		default
Component Monitoring: Threshold monitors: Alarm Severity on Maximum Rate	MAJOR		default

Table 40 Web Monitor tab (Sheet 11 of 12)

Parameter	Recommended value	Notes	Example
Component Monitoring: Threshold monitors: Alarm Severity on Upper Limit OverRun	MAJOR		default
Component Monitoring: Threshold monitors: Alarm Severity on Lower Limit UnderRun	MAJOR		default
Component Monitoring: Threshold monitors: Usage state affected	unchecked		default
Component Monitoring: Class name	com.nortelnetworks.ims.mw.probe.iplanet.IplanetWebServerStatsHandler		default
Component Monitoring: Component name	Web Server Stats		default
Component Monitoring: Polling interval in minutes	1		default
Component Monitoring: Active for polling	checked		default
Component Monitoring: Class name	com.nortelnetworks.ims.mw.probe.iplanet.IplanetListenSocketHandler		default
Component Monitoring: Component name	Listen Socket Stats		default
Component Monitoring: Polling interval in minutes	1		default
Component Monitoring: Active for polling	checked		default
Trap handlers: Trap handler class name	com.nortelnetworks.ims.mw.probe.iplanet.IplanetOperationTrapHandler		default

Table 40 Web Monitor tab (Sheet 12 of 12)

Parameter	Recommended value	Notes	Example
Trap handlers: Trap handler name	iPlanet Operation Trap		default
Trap handlers: Active	checked		default

2 Click **Apply**.

Wait for the component to appear in server list. The iPlanet Monitor is installed on the same server as the Provisioning Module.

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Verification procedures

Verifying Server1 (DBSvr/MgmtSvr/AcctMgr)

The following commands are executed on the database/management/accounting Sun Fire V100 server using PuTTY SSH into the machine logical IP address.

Example: Open a PuTTY SSH session to 120.120.13.22

Procedure 43 Verifying the database server

At the management pc,

1 Log into the server as *nortel/<new nortel user password>*

2 After the MCS Base Platform System Software installation, execute the following command to verify IP addressing.

@mcsmicromgmt]/export/home/nortel:=> ifconfig -a

lo0:
flags=1000849<UP,LOOPBACK,RUNNING,MULTICAST,IPv4> mtu 8232 index 1 inet 127.0.0.1 netmask ff000000

dmfe0:
flags=9040843<UP,BROADCAST,RUNNING,MULTICAST,DEPRECATED,IPv4,NOFAILOVER> mtu 1500 index 2 inet 120.120.13.20 netmask ffffff00 broadcast 120.120.13.255

groupname imspub

dmfe0:1:
flags=1000843<UP,BROADCAST,RUNNING,MULTICAST,IPv4> mtu 1500 index 2 inet 120.120.13.22 netmask ffffff00 broadcast 120.120.13.255

dmfe1:
flags=69040843<UP,BROADCAST,RUNNING,MULTICAST,DEPRECATED,IPv4,NOFAILOVER,STANDBY,INACTIVE> mtu 1500 index 3 inet 120.120.13.21 netmask ffffff00 broadcast 120.120.13.255 groupname imspub

3 Look for the entry that starts with ‘dmfe0.’ The parameters that follow show the IP address, subnet mask, and whether the

interface is ‘UP.’ This example output shows that dmfe0 is assigned to IP address 120.120.13.20, its subnet mask is ffffff00, which translates to 255.255.255.0, and the interface is UP (active).

4 Look for the entry which starts with ‘dmfe1.’ The parameters that follow show the IP address, subnet mask, and whether the interface is ‘UP.’ This example output shows that dmfe1 is assigned to IP address 120.120.13.21, its subnet mask is ffffff00 which translates to 255.255.255.0, and the interface is UP (active).

5 Look for the entry which starts with ‘dmfe0:1.’ This is the machine logical interface. Notice that the machine logical has ‘attached’ itself to dmfe0 and added a suffix of ‘:1’ creating dmfe0:1. When a machine logical (or service logical) interface is created, the V100 will always attempt to ‘attach’ to the first interface, dmfe0. If dmfe0 were unavailable, or out of service, the machine logical would then ‘attach’ itself to dmfe1 creating dmfe1:1. The parameters which follow show the IP address, subnet mask, and whether the interface is ‘UP.’

This example output shows that dmfe0:1 is assigned to IP address 120.120.13.22, its subnet mask is ffffff00, which translates to 255.255.255.0, and the interface is UP (active).

6 Verify that the host file is correct:

[@micromgmt]/export/home/nortel:=> cat /etc/hosts

#

 # Internet host table

#

127.0.0.1 localhost

120.120.13.22 micromgmt loghost

120.120.13.20 micromgmtdmfe0
120.120.13.21 micromgmtdmfe1

The first 120 address should reflect your machine logical IP address in addition to the hostname and the ‘loghost’ tag.

The second 120 address should reflect the dmfe0 interface followed by the hostname concatenated with ‘dmfe0.’

The third 120 address should reflect the dmfe1 interface followed by the hostname concatenated with ‘dmfe1.’

7 Verify the defaultroutefile:

[@micromgmt]/export/home/nortel:=> cat /etc/defaultrouter

120.120.13.1

The only address in this file defines your default gateway route (your router). If this file is empty and the machine is rebooted, then you will not have network access to your other servers.

Verifying Server2 (application server)

The following commands are executed on the application server using PuTTY SSH into the machine logical IP address.

Example: Open a PuTTY SSH session to 120.120.13.25

Procedure 44 Verifying the application servers

At the management pc,

1 Log into the server as *nortel/<new nortel user password>*

2 After installing the MCS Base Platform System Software CDs 1-6, execute the following command to verify IP addressing.

[@mcsmicroapp]/export/home/nortel:=> ifconfig -a

lo0:
flags=1000849<UP,LOOPBACK,RUNNING,MULTICAST,IPv4> mtu 8232 index 1 inet 127.0.0.1 netmask ff000000

dmfe0:
flags=9040843<UP,BROADCAST,RUNNING,MULTICAST,DEPRECATED,IPv4,NOFAILOVER> mtu 1500 index 2 inet 120.120.13.23 netmask ffffff00 broadcast 120.120.13.255 groupname imspub

dmfe0:1:
flags=1000843<UP,BROADCAST,RUNNING,MULTICAST,IPv4> mtu 1500 index 2 inet 120.120.13.25 netmask ffffff00 broadcast 120.120.13.255

dmfe1:
flags=69040843<UP,BROADCAST,RUNNING,MULTICAST,DEPRECATED,IPv4,NOFAILOVER,STANDBY,INACTIVE> mtu 1500 index 3 inet 120.120.13.24 netmask ffffff00 broadcast 120.120.13.255 groupname imspub

3 Look for the entry that starts with ‘dmfe0.’ The parameters that follow show the IP address, subnet mask, and whether the interface is ‘UP.’ This example output shows that dmfe0 is assigned to IP address 120.120.13.23, its subnet mask is ffffff00 which translates to 255.255.255.0, and the interface is UP (active).

4 Look for the entry that starts with ‘dmfe1.’ The parameters that follow show the IP address, subnet mask, and whether the interface is ‘UP.’ This example output shows that dmfe1 is assigned to IP address 120.120.13.24, its subnet mask is ffffff00 which translates to 255.255.255.0, and the interface is UP (active).

5 Look for the entry that starts with ‘dmfe0:1.’ This is the machine logical interface. Notice that the machine logical has ‘attached’ itself to dmfe0 and added a suffix of ‘:1’ creating dmfe0:1. When a machine logical (or service logical) interface is created, the V100 will always attempt to ‘attach’ to the first interface, dmfe0. If dmfe0 were unavailable, or out of service, the machine logical would then ‘attach’ itself to dmfe1 creating dmfe1:1. The parameters that follow show the IP address, subnet mask, and whether the interface is ‘UP.’

This example output shows that dmfe0:1 is assigned to IP address 120.120.13.25, its subnet mask is ffffff00, which translates to 255.255.255.0, and the interface is UP (active).

6 Verify that the hosts file is correct:

[@microapp]/export/home/nortel:=> cat /etc/hosts

#

 # Internet host table

#

127.0.0.1 localhost

120.120.13.25 microapp loghost

120.120.13.23 microappdmfe0

120.120.13.24 microappdmfe1

The first 120 address should reflect your machine logical IP address in addition to the hostname and the ‘loghost’ tag.

The second 120 address should reflect the dmfe0 interface followed by the hostname concatenated with ‘dmfe0.’

The third 120 address should reflect the dmfe1 interface followed by the hostname concatenated with ‘dmfe1.’

7 Verify the defaultroute file:

[@microapp]/export/home/nortel:=> cat /etc/defaultrouter

120.120.13.1

The only address in this file defines your default gateway route (your router). If this file is empty and the machine is rebooted, then you will not have network access to your other servers.

Verifying the database load (imssipdb) deployment

The initial deployment of the imssipdb load is command-line driven from the MgmtSvr. Updates to the imssipdb load in future loads will be handled through the System Management Console.

The following section describes the steps to watch the imssipdb deployment logs as the dbdeploy.pl script executes.

The following commands are executed on the database server using PuTTY SSH into the machine logical IP address.

Example: Open a PuTTY SSH session to 120.120.13.22

Procedure 45 Verifying the database load (imssipdb) deployment

ATTENTION
If the database deployment has completed, this file will not exist.

At the management pc,

1. Log into the database server as *nortel/<new nortel user password>*.
2. Execute the following command to *tail* (watch) the imssipdb deploy log.

   [@micromgmt] /export/home/nortel:=> tail -f /tmp/*SQL*

   As the dbdeploy.pl script executes, a temporary log is created in the /tmp directory on the database server. Note that the SQL file in the /tmp directory will not be present until after the dbdeploy.pl script begins.
3. While ‘tailing’ the SQL temp file, look for errors in the log file. These errors could include statements such as ‘error’, ‘failed’, and so on. If any error condition is encountered, do not continue. Contact support immediately.
4. The imssipdb deployment is successful when the Server1’s dbdeploy.pl script reports ‘deployed successfully.’

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Appendix A Deploying the PC Client

Along with the initial load, Nortel Networks delivers the following:

- Java Network Launch Protocol (JNLP) file: pcclient.jnlp
- Zip file containing latest code resources: pcclientcode.zip

System administrators need to perform the following steps to deploy Multimedia PC Client loads.

At the management pc,

1. Unzip the zip fle containing the code resources (pcclientcode.zip) onto any machine connected to the network. Make sure that you preserve the paths (for example, the checkbox “Use folder names” in Winzip should be checked).
2. Identify the Provisioning Module server(s) on which to deploy the load.
3. Customization of the JNLP file (pcclient.jnlp) is possible by modifying certain attributes. For example, if this update is considered to be a critical one, the critical value can be checked. If end users are not prompted for confirmation when updates are applied, then the confirm value can be assigned as false. Modification of title and icon for the confirmation dialog is also possible.
4. Use a secure File Transfer Protocol (sFTP) tool to perform the following tasks:
   a. Connect to the server.
   b. Upload the pcclient.jnlp to /IMS/web/data/web/webapps/prov/pcclient.jnlp
   c. Upload the unzipped code resource files to /IMS/web/data/web/webapps/prov/pcclientclode.

It is possible to perform steps 1 - 4 directly on the Provisioning servers without FTP.

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Appendix B Reloading IP addresses after system installation

This process prompts you for the hostname, country, time-zone, and IP address to enable movement of the system after the system is installed. You can re-enter the same data that was already in those parameters if they have not changed. You can change the system identification parameters and all IP addresses binding to a single interface without having to reload the OS from a CD. This procedure is for pre-staging a system. It cannot be used on a running operational system.

The following procedure (Procedure 46, Reloading IP addresses after system installation) brings the system to the `boot` prompt. When the system reboots, it invokes the Solaris system identification process and then invokes the MCP commissioning script at root login. This is the same configuration procedure executed during CD installation and commissioning and is common for all MCP-supported Solaris platforms.

This procedure, called *re-ip* in this chapter,

- requires two system reboots to complete the configuration
- is valid for Solaris servers only
- does not modify MCP software configuration data or provisioning data

You will need the six Solaris installation CDs and the six Oracle CDs to perform this procedure.

At each configuration step you will see a summary of the configuration and can accept that configuration or change it. Once the data configuration is completed, the services will be hardened again and the system rebooted.

Completely re-install the Solaris CDs in the DBSvr and MgmtSvr/AcctMgr machines as described earlier in this document. Then re-install the Oracle CDs as described earlier in this document. Once you have completed the Oracle installation, you can unconfigure

the server, which takes about five minutes, and then reload the IP addresses (see Procedure 46, Reloading IP addresses after system installation). Reloading the IP addresses on each server takes about 15 minutes.

Procedure 46 Reloading IP addresses after system installation

At the management pc,

1 Log in to the system as *root* through the console port connection. You must have the *root* password to apply this procedure.

/usr/local/bin/unconfig_server

2 You will see the following message: `Do you really want to re-configure all IP addresses and system data of this machine [N]` Answer **Y** and press the **Enter** key to continue. You will then see a warning message: `This program will unconfigure your system. It will cause it to revert to a "blank" system. It will not have a name or know about other systems or networks.`

`This program will also halt the system.`

`Do you want to continue (y/n)?`

The system assumes the answer is **Y**.

3 The system will reboot and come up to the *boot* prompt {ok}

4 The system is now ready to re-configure. You can type **poweroff** at the `ok` prompt if you wish to power the machine off.

5 To reconfigure the server at this point, if you are at the boot prompt {ok}, enter the **boot** command. If you are not at the boot prompt, power on the server. To do so, you can press the power-on button on the server or connect to the LOM port and type **poweron**.

6 When the server is back up you will see the following question:

`What type of terminal are you using?`

1) ANSI Standard CRT

2) DEC VT100

3) PC Console

4) Sun Command Tool

5) Sun Workstation

6) X Terminal Emulator (xterms)

7) Other

```
Type the number of your choice and press Return:
```

Select **2** and press **Enter**.

7 See the instructions for installing Disk 1 in this document for more information on what to enter for the following items:

- Networked
- DHCP
- Primary Network Interface
- Hostname (You may have to backspace over the word "unknown" and type in the correct name.)
- IP Address
- Subnet
- Netmask
- iPV6
- Confirm
- Security Policy
- Confirm

  Note: This procedure skips some of the steps for initial installation of CD1.

- Regions
- Time Zone
- Date & Time
- Confirm
- Password

You will then see `System identification is completed.` The system reboots. You can log back in as *root*.

8 At the MgmtSvr, you will see the following message:

```
You are now configuring the NTP time source for
this server. The servers which run the
Management and Accounting service will be the
source. You will need to provide the Machine
Logical IP Address of each server. If running
simplex mode, provide the same address twice.

Press the Enter Key to Continue --
```

9 Follow the instructions for installing Disk 4 in this document. After step 13 in the instructions for installing the DBSvr1 or DVSvr2, you will see the following:

Follow the instructions below as shown in this message that appears on your machine:

```
Starting Oracle Intelligent Agent....

Agent started

################################################
#                                              #
#   Important Notice !!!!!!                    #
#                                              #
#  Your data base is replicated                #
#  To make the replication work you must execute the    #
#  following steps:                            #
#                                              #
#  (1) Log in as oracle to the replicated (other) DB     #
#     machine                                  #
#                                              #
#  (2) issue the command                       #
#    configure_replication                     #
#                                              #
#  (3) restart the database                    #
#                                              #
################################################
```

Press the **Enter** key to continue ----

Note: When you perform this procedure on an IPCM/WCM/Prov machine, you will not be asked about deploying a Provisioning Module to that server.

10 Execute the following steps before deploying any components. To set the SysMgr and AcctMgr Service Logical IP addresses,

a Log in as *root* to the Management server and type in the following command:
#/usr/local/bin/Interface.pl add sysmgr

b Then log in to the Accounting server and type in the following command:
#/usr/local/bin/Interface.pl add acctmgr

Multimedia Communication Portfolio

Multimedia Communication Server

2-server Sun Fire V100 Solaris Installation and Commissioning Guide

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